

GunDigest® Book of

CENTERFIRE RIFLES

ASSEMBLY/DISASSEMBLY

3rd
EDITION

STEP-BY-STEP
PHOTOS FOR
68 MODELS &
400 VARIANTS

Kevin Muramatsu



GunDigest® Book of
**CENTERFIRE
RIFLES**
ASSEMBLY/DISASSEMBLY

3rd
EDITION

Kevin Muramatsu

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Published by



Gun Digest® Books, an imprint of F+W Media, Inc.
Krause Publications • 700 East State Street • Iola, WI 54990-0001
715-445-2214 • 888-457-2873
www.krausebooks.com

To order books or other products call toll-free 1-800-258-0929
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ISBN-13: 978-1-4402-3544-3
ISBN-10: 1-4402-3544-9

Cover Design by Al West
Designed by Tom Nelsen
Edited by Corrina Peterson

Printed in the United States of America

Every writer has someone that supports, encourages, and assists in many other ways. Often it is a spouse; such as it is in this case. My wife Rachel puts up with my procrastination, my terse impatient directions when taking pictures, yet still brings me the hot chocolate without me even making a request. It is to Rachel that this book is dedicated.

Acknowledgements

I'd like to thank these folks for their assistance:

Brian VanKleek of the Wolf's Den, Jack Pendergrass, Tim Swan, Mike Nischalke of Hunter Outdoor Communications, and Dave Defenbaugh at Pine Tech College for the loan of several rifles. Thanks, too, to my wife Rachel and, of course, my three children, Kalea, Jonas, and Emiko, for letting me be absent for a time to carry out this project. Also, since I have a habit of purchasing and keeping the guns that I write about, I'd like to thank CDNN, RSR Group, and Davidsons (all three are distributors) for having in stock the several rifles I purchased for coverage in this book.

A Note on Reassembly

Most of the rifles covered in this book can be reassembled by simply reversing the order of disassembly, carefully replacing the parts in the same manner they were removed. In a few instances, special instructions are required, and these are listed with each gun under "Reassembly Tips." In certain cases, reassembly photos are also provided.

If there are no special instructions or photos with a particular gun, you may assume that it can just be reassembled in reverse order. During disassembly, note the relationship of all parts and springs, take digital photos of the installed arrangements, and lay them out on the workbench in the order they were removed. By following this procedure, and referring to your own digital images, you should have no difficulty.

Contents

Dedication	3
Acknowledgements	3
Introduction.....	6
Tools	8
Argentine Model 1891 Mauser	13
Austrian Mannlicher Model 1895	20
British SMLE No. 1, Mark III	28
Browning BAR	36
Browning BLR 81	46
Calico Model M-900.....	56
Colt AR-15	66
CZ 527 Lux.....	77
Dixie Sharps Model 1874	85
Egyptian Hakim	93
Egyptian Rasheed	104
Feather AT-9 Carbine	114
FN-FAL.....	121
FN-Model 1949 (ABL)	133
Harrington & Richardson Ultra	143
Hi-Point Model 995	150
HK SL8-6.....	159
Howa 1500	170
Italian Carcano Model 1891 Carbine.....	176
Japanese Arisaka Type 99	183
JRC.....	191
Mannlicher-Schoenauer Model 1961-MCA.....	199
Marlin Model 336	209
Marlin X7Y	217
Mauser Model 1898	224
Mossberg 100 ATR	232
Mossberg 479	237
Navy Arms 1873 Springfield	246
Remington Model 600	256
Remington Model 700	262

Remington Model 742	268
Remington Model 770	281
Remington Model 788	287
Remington Model 7600	294
Remington Rolling Block	302
Rossi Circuit Judge	310
Ruger 44 Carbine	319
Ruger American	331
Ruger Mini-14.....	338
Ruger No. 1	346
Ruger Model 77	354
Ruger Model 96-44	362
Russian Mosin-Nagant Model 1891	369
Russian SKS (Simonov)	376
Sako Forester	386
Savage Model 25.....	393
Savage Model 99.....	399
Savage Model 110.....	408
SIGArms Model SHR970	416
Springfield M1A.....	421
Springfield M6 Scout	434
Steyr Mannlicher Scout.....	440
Swedish Mauser Model 1894.....	451
Swiss Schmidt-Rubin Model 1911	458
Thompson Model 1927A1	466
Thompson/ Center Venture	473
Tikka M695.....	478
U.S. Model 1894 Krag-Jorgensen.....	483
U.S. Model 1917 Enfield	490
U.S. 30 M-1 Carbine	497
U.S. M-1 Garand.....	505
U.S. Model 1903 Springfield	514
Weatherby Mark V	521
Winchester Model 70	528
Winchester Model 71	536
Winchester Model 1873	545
Winchester Model 1892	555
Winchester Model 1894	565
Index/Cross-Reference.....	574

Introduction

One of the very pleasant aspects of gunsmithing, or simply being a gun enthusiast, is that there is always something new around the corner—well, as long as everything remains legal and unbanned for silly reasons. Generally, something truly new is rare in the gun world, just like in any other industry, I suppose. But still, it's fun to see the variety of designs, the ways that different minds solve the same problem. A major problem at the time of this writing is the stagnation of certain areas of the gun industry.

With a booming free-market economy disappearing into the shadow of socialism, the amount of liquidity that people are willing to pour into firearms also decreases. Sales of traditional firearms, such as hunting rifles, birding shotguns, and the like, have flatlined for some time. Sales of handguns, particularly those suitable for concealed carry, and black rifles, like the ubiquitous AR-15 and all its clones, sell like a uncontrolled wildfire. When people are concerned for their safety, the most practical gun to spend money on is the pistol or modern sporting rifle. A great deal of time and money has been spent on these types of firearms, and the JRC introduced in this manual is a perfect example.

The days when a guy went out and bought a new hunting rifle every other year appear to have vanished, yet many of our gun companies depend on such rifle sales to stay solvent. Of course, if you don't materialize at SHOT show with something new, then no one pays attention, right? So the latest trend is to manufacture rifles meant for the traditional hunt and with the traditional styling, but for half of what similar guns tend to cost. If you can't get someone to purchase an \$800 bolt rifle, then maybe you can get two someones to purchase \$400 bolt rifles (with scopes, even) and come out square, or even ahead. Ruger, Marlin, Remington, Savage, T/C, S&W, and Mossberg have all jumped on this bandwagon and, frankly, they did a pretty good job. Many of these rifles are loosely or closely based on the Howa 1500 design and, in fact, many of the parts or the rifles outright are manufactured by Howa Heavy Industries of Japan. They are made just different enough that they are indeed different. Whatever the origin, this is the trend, and serious consideration should be made as to whether any of these rifles can affordably be repaired, as all of them retail for under \$500. Fortunately, they all appear to be very sturdily built, but they will still need to be cleaned, so they have been included in this manual.

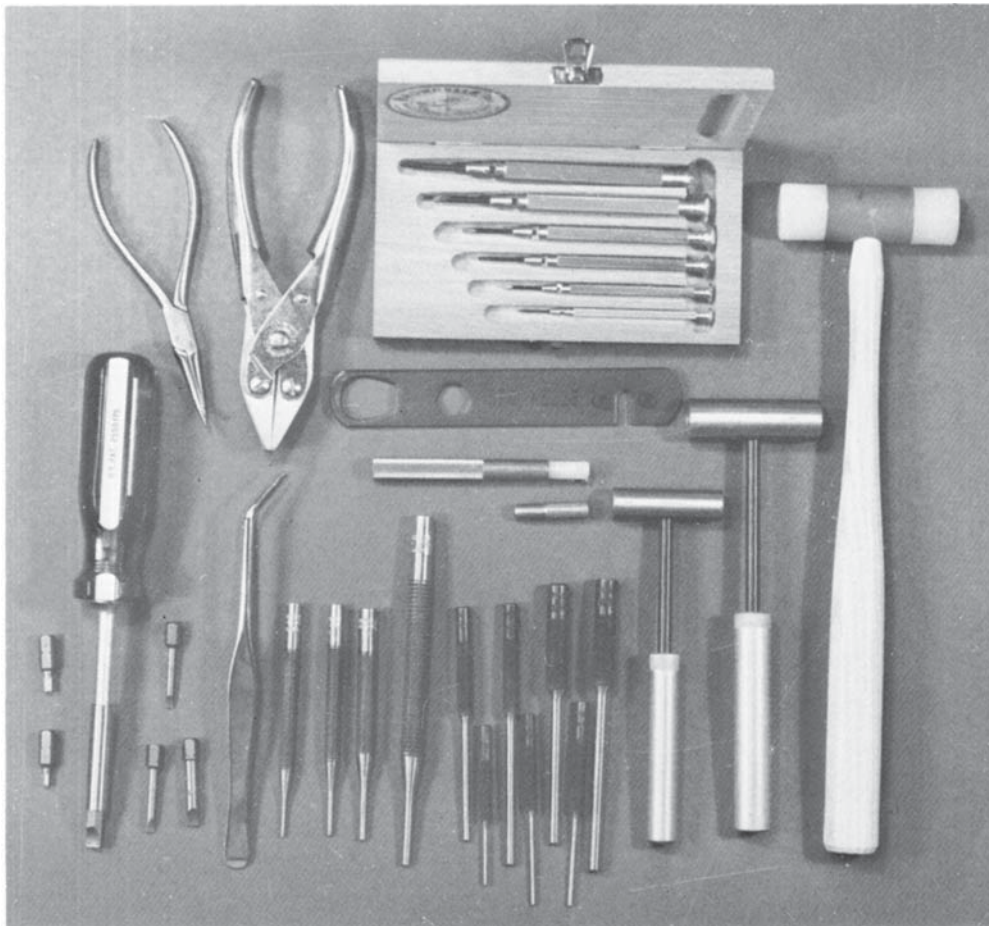
Of course, before you begin, the standard exhortations must be made. Please make sure that the rifle is completely unloaded before you begin! I have blown holes in walls (thankfully with no injury) because of stuck cartridges in chambers and magazines (I'm not unique in that) and I don't want you to do the same thing. Wear safety glasses and use a nice big, flat, well-lit space to do your disassembly.

It really helps to have the user manuals for the guns you disassemble, if you can get them. Fortunately, most are available on the Internet from the manufacturers;

sometimes even old manuals can be found in PDF formats. I would be remiss to not mention the Gun Digest Exploded Gun Drawings by Murtz. This gigantic book has a mega-library of drawings that simply can't hurt to have around. Don't forget to reference the index back yonder, as many guns have similar takedowns to the guns covered in this book, and the crossreference will lead you like a carrot hanging in front of your face. There is a tools section included, too, so you can get some idea of what standard and what specialty tools are suggested for the work. Finally, every now and then, slightly different models may have slightly different steps in disassembly. It's impossible to record them all, but with a little of the mechanical aptitude that anyone engaging in this enterprise should possess, there should be little difficulty.

Kevin Muramatsu
Somewhere in the Twin Cities
Somewhere in Minnesota
March, 2012

Tools



Countless firearms, old and new, bear the marks, burrs and gouges that are the result of using the wrong tools for taking them apart. In the interest of preventing this sort of thing, I am including here a group of tools that are the best types for the disassembly of shotguns. Except for the few shop-made tools for special purposes, all of those shown here are available from one of these sources.

Brownells Inc.
Route 2, Box 1,
200 S. Front St.
Montezuma, Iowa 50171

B-Square Company
P.O. Box 11281
Fort Worth, Texas 761092

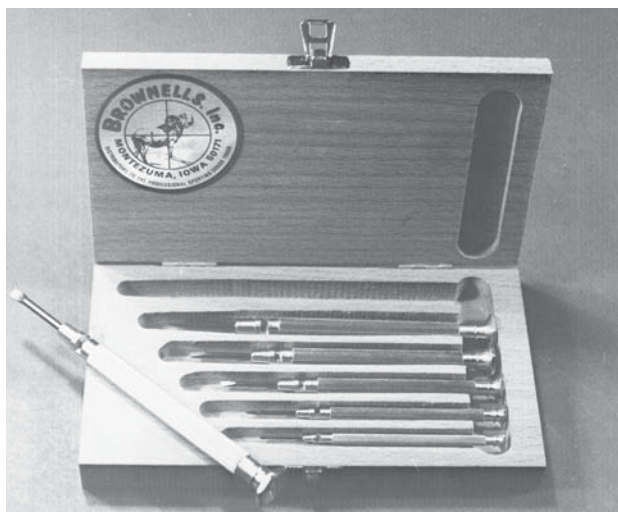
General Instructions:

Screwdrivers: Always be sure the blade of the screwdriver exactly fits the slot in the screw head, both in thickness and in width. If you don't have one that fits, grind or file the tip until it does. You may ruin a few screwdrivers, but better them than the screws on a fine shotgun.

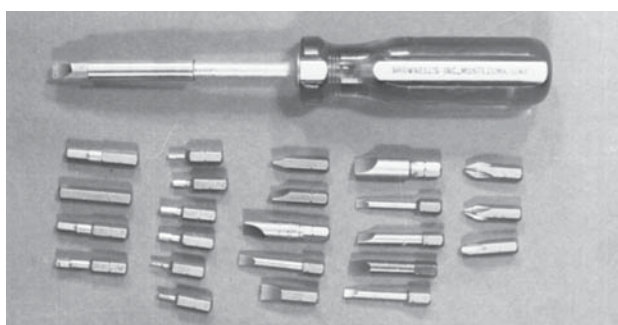
Slave pins: There are several references in this book to slave pins, and some non-gunsmith readers may not be familiar with the term. A slave pin is simply a short length of rod stock (in some cases, a section of a nail will

do) which is used to keep two parts, or a part and a spring, together during reassembly. The slave pin must be slightly smaller in diameter than the hole in the part, so it will push out easily as the original pin is driven in to retain the part. When making a slave pin, its length should be slightly less than the width of the part in which it is being used, and the ends of the pin should be rounded or beveled.

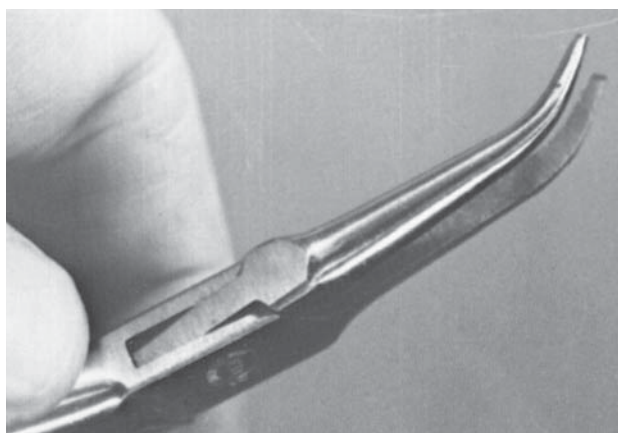
Sights: Nearly all dovetail-mounted sights are drifted out toward the right, using a nylon, aluminum, or brass drift punch.



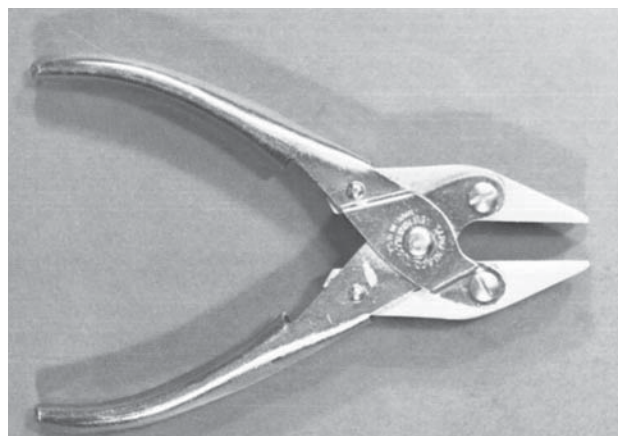
- 1.** The tiniest of these fine German instrument screwdrivers from Brownells is too small for most gun work, but you'll see the rest of them used frequently throughout the book. There are many tight places where these will come in handy.



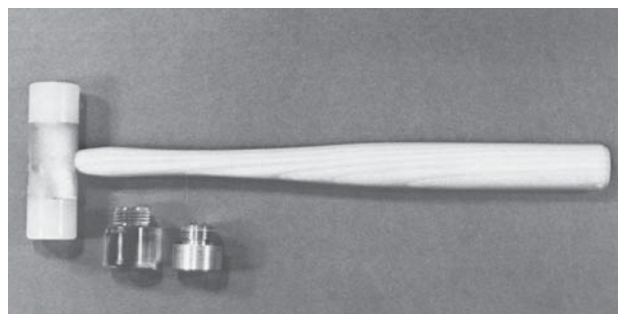
- 2.** When a larger screwdriver is needed, this set from Brownells covers a wide range of blade sizes and also has Phillips- and Allen-type inserts. The tips are held in place by a strong magnet, yet are easily changed. These tips are very hard. With enough force you might manage to break one, but they'll never bend.



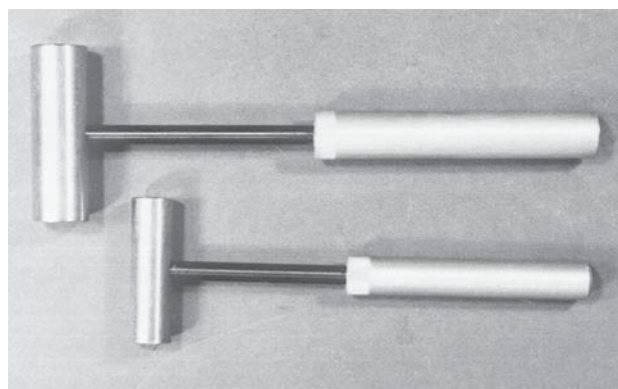
- 3.** You should have at least one good pair of bent sharpnosed pliers. These, from Brownells, have a box joint and smooth inner faces to help prevent marring.



- 4.** For heavier gripping, these Bernard parallel-jaw pliers from Brownells have smooth-faced jaw-pieces of unhardened steel to prevent marring of parts.

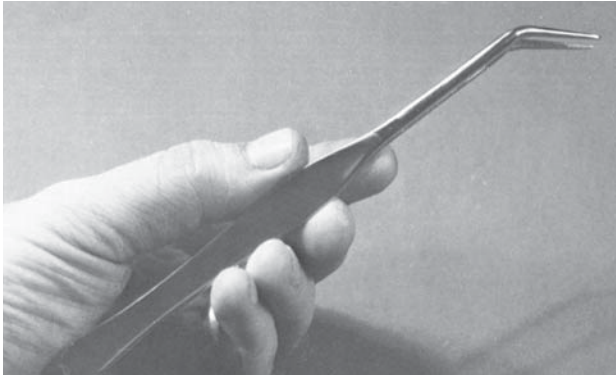


- 5.** For situations where a non-marring rap is needed, this hammer from Brownells is ideal. It is shown with nylon faces on the head, but other faces of plastic and brass are also available. All are easily replaceable.

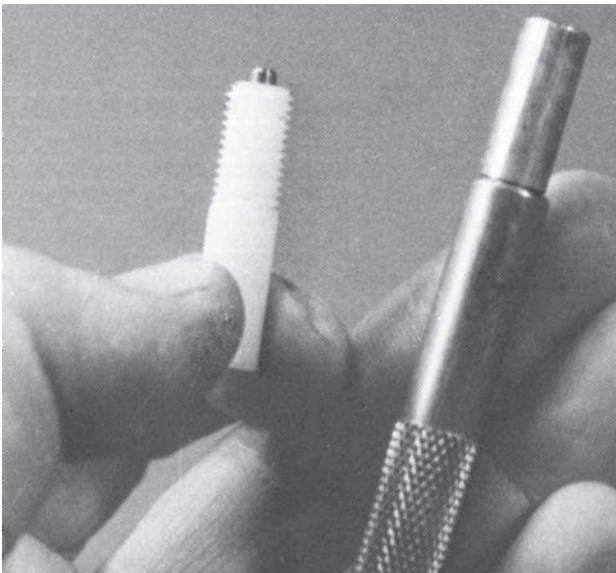
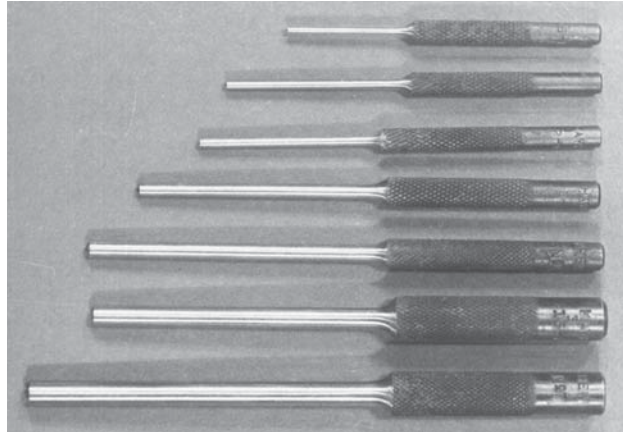


- 6.** For drifting out pins, these small all-metal hammers from B-Square are the best I've seen. Two sizes (weights) are available and they're well worth the modest cost.

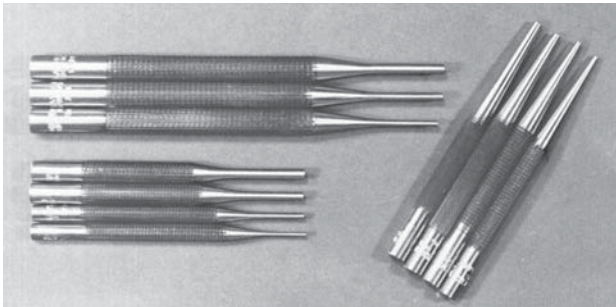
10 : Tools



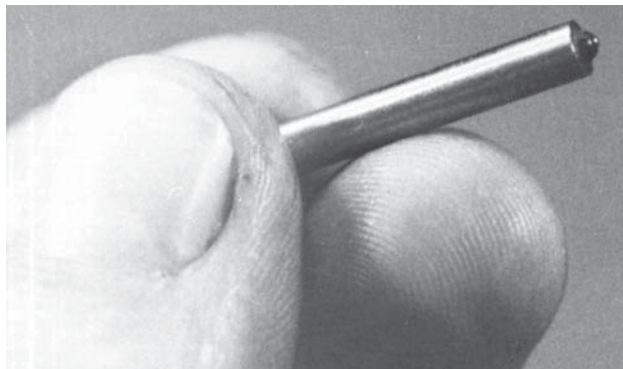
- 7.** For situations where reach and accessibility are beyond the capabilities of sharp-nosed pliers, a pair of large sharp-nosed forceps (tweezers) will be invaluable.



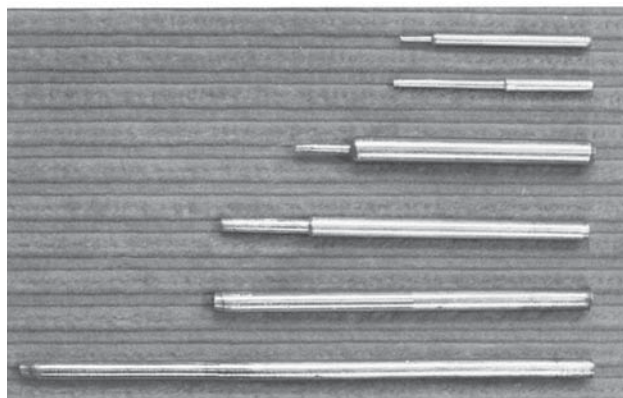
- 8.** One of the most-used tools in my shop is this nylon tipped drift punch, shown with an optional brass tip in place on the handle. It has a steel pin inside the nylon tip for strength. From Brownells, and absolutely essential.



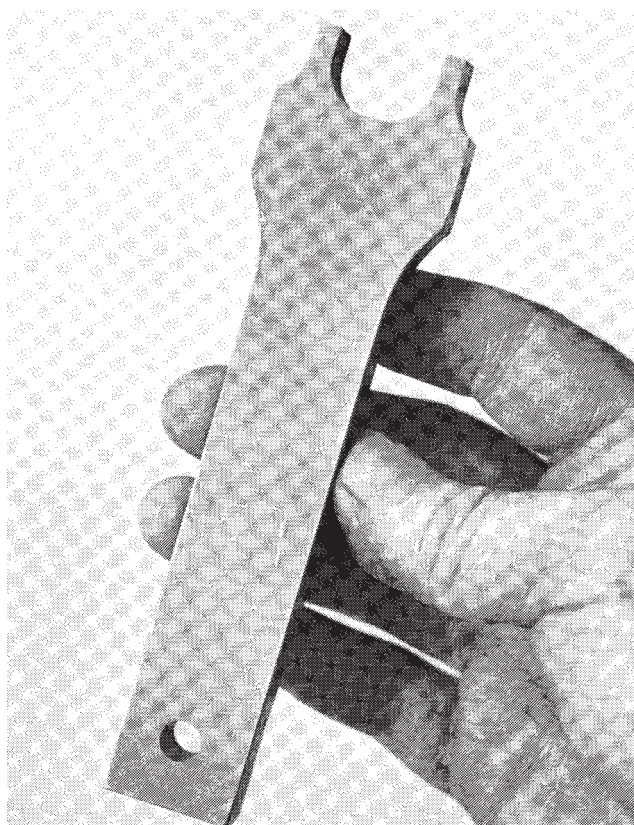
- 9.** A good set of drift punches will prevent a lot of marred pins. These, from Brownells, are made by Mayhew. The tapered punches at the right are for starting pins, the others for pushing them through. Two sizes are available-4 inches or 6 inches.



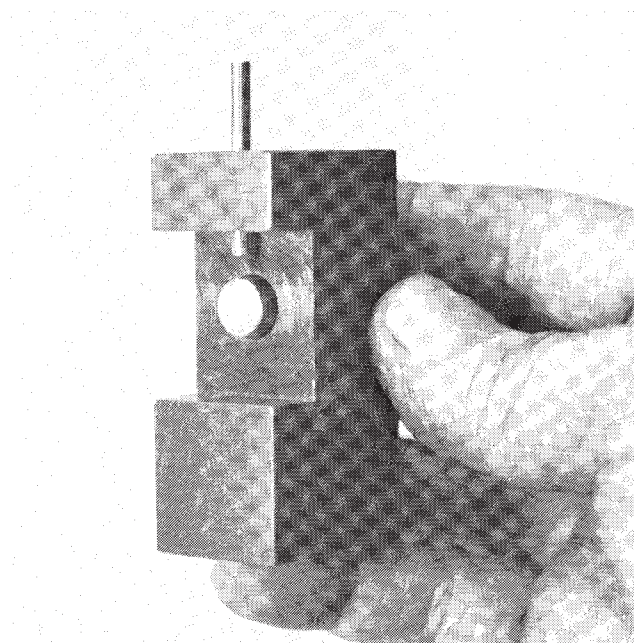
- 10.** These punches by Mayhew are designed specifically for roll pins and have a projection at the center of the tip to fit the hollow center of a roll pin, driving it out without deformation of the ends. From Brownells.



- 11.** Some of the necessary tools are easily made in the shop. These non-marring drift punches were made from three sizes of welder's brazing rod.



- 12.** This heavy wrench from Brownells is designed specifically for removal of the barrel nut in Remington Model 742 and Model 760 rifles. It's a quality tool of 01 steel, hardened to Rockwell C 46-48.



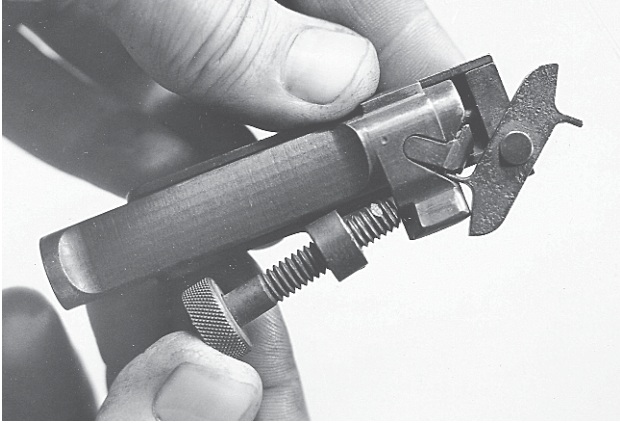
- 13.** Most Remington centerfire rifles have the extractor mounted inside the front of the bolt by a tiny rivet. This special tool from B-square will set these rivets with a minimum of trouble.



- 14.** These extractor pliers are used in both the removal and replacement of Mauser or Springfield-type extractors, making a difficult job much easier. From Brownells.



- 15.** These wrenches are designed for removal of the piston nut in the .30 U.S. Carbine. The tool at the right is the original military type with three lugs, and the one at the left is a double-end type, to fit both the military guns and the two-slot nut found on some commercial civilian Carbines. These wrenches are available from several military surplus and commercial sources.



- 16.** Without this tool removal of the firing pin, ejector and extractor from the 30 U.S. Carbine is a tedious job. It is available from military surplus sources. Similar tools are available for M1 Garands and M-14 rifle bolts.



- 17.** This combination tool for the U.S. M-1 rifle (Garand) has provisions for clearing the chamber, installing the extractor and ejector in the bolt, a screwdriver, and other features. A completely-equipped Garand has one of these in the storage trap in the buttstock. They are available from military surplus sources.



- 18.** As more and more rifles begin to use more and more AR-15 parts, the tools for ARs become more necessary to have. This M4 stock wrench is necessary for removing carbine and M4-style stock tubes on many of these guns.



Argentine Model 1891 Mauser

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Argentine Model 1891 Mauser also apply to the following guns:

Argentine Model 1891 Carbine

**Belgian Model 1889 Rifle,
Carbine**

Spanish Model 1891 Rifle

Turkish Model 1890

Turkish Model 90T

Yugoslavian Model 90T

Data: Argentine Model 1891

Origin: Germany

Manufacturer: Ludwig Loewe, Berlin, and
Deutsche Waffen und
Munitionsfabriken

Cartridge: 7.65mm Mauser

Magazine capacity: 5 rounds

Overall length: 48-1/2 inches

Barrel length: 29 inches

Weight: 9 pounds

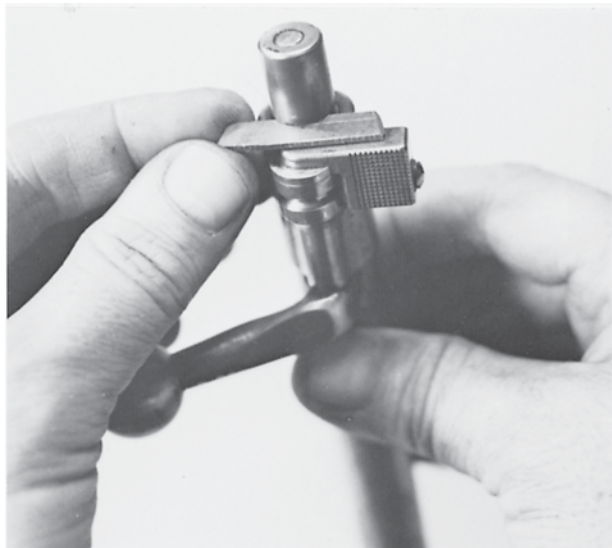
The Mauser of 1891 was used officially by Belgium, Spain, Turkey, and Argentina, and the latter version is one of the most well known, as it was made in larger quantity. Many of these finely-made guns have sold on the surplus market, and they are frequently encountered. This was the first Mauser rifle to have a box magazine and the first to have a one-piece bolt with opposed front locking lugs, a feature copied by everyone since that time. A carbine version of the Model 1891 was also made, and it was mechanically identical. The gun shown here has been sporterized.

Disassembly:

1. Open the bolt, hold the bolt stop pulled out to the left, and remove the bolt toward the rear.



2. Grip the underlug of the cocking piece firmly in a padded vise, and pull the bolt forward until a thin piece of steel can be inserted between the front of the cocking piece and the rear of the bolt sleeve. Release the spring tension, and the piece of steel will trap the striker at the rear.

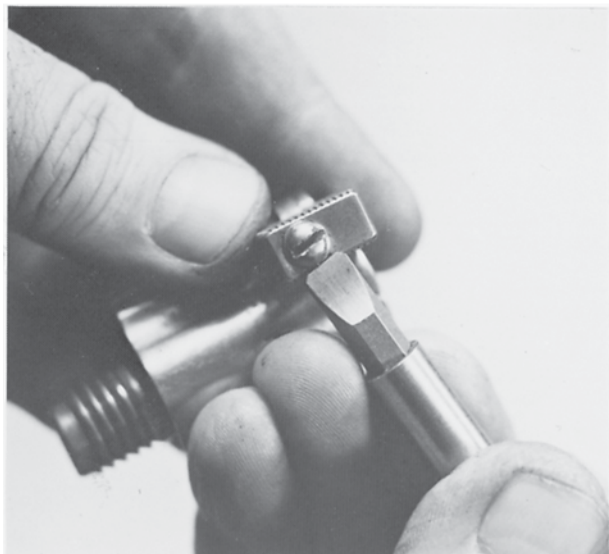


3. Unscrew the bolt sleeve and striker assembly and remove it toward the rear, taking care not to dislodge the piece of steel holding the striker.

4. Grip the front of the striker firmly in a padded vise, and push the bolt sleeve forward, allowing the piece of steel to fall out. Continue forward with the sleeve until its rear edge is clear of the front edge of the cocking piece lug. Keep a firm grip on the bolt sleeve, as the striker spring is fully compressed. Unscrew the cocking piece, and remove it.



5. Slowly release the spring tension, and remove the bolt sleeve and striker spring toward the rear.



6. Remove the safety detent screw from the outer face of the safety-lever, and take out the spring and plunger. The spring is under tension, so control the screw and ease it out. Remove the safety-lever toward the rear.



7. Insert a screwdriver blade under the beak of the extractor and lift it just enough to clear its front underlug from its recess in the bolt. Lever the extractor off toward the front. **Caution:** These are often tightly fitted. If not necessary for repair, the extractor should not be removed.

16 : Argentine Model 1891 Mauser

- 8.** If the gun still has a full military stock, unscrew the cleaning rod, depress the front barrel band latch on the underside of the stock, and slide the barrel band off toward the front. Loosen the sling loop screw in the rear barrel band, depress its latch and slide it off toward the front. If the original upper handguard is present, don't attempt to remove it as it is held on by carefully twisted copper wire. Some Model 1891 rifles have a magazine catch at the front of the magazine, and this is rotated a half-turn. The magazine latch within the guard is then depressed, and the magazine removed downward. On the rifle shown, which lacks the front catch, the next step is to remove the vertical screw just forward of the magazine.

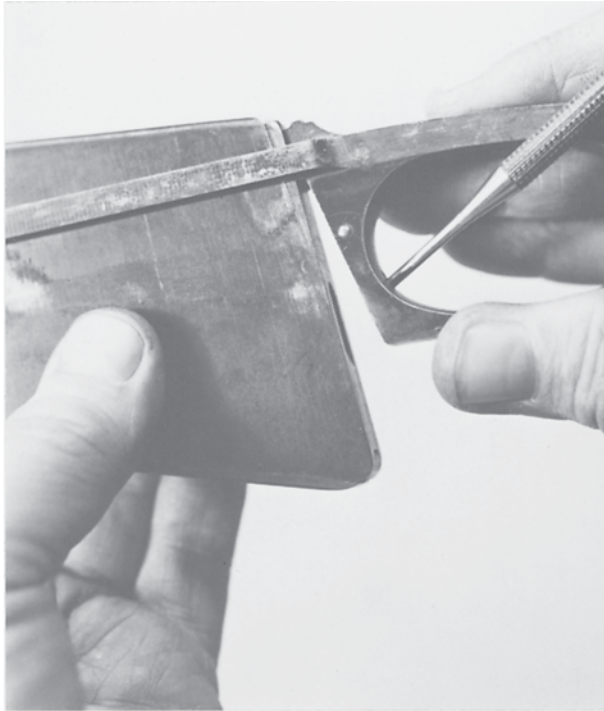


- 9.** Remove the vertical screw on the underside, behind the trigger guard.

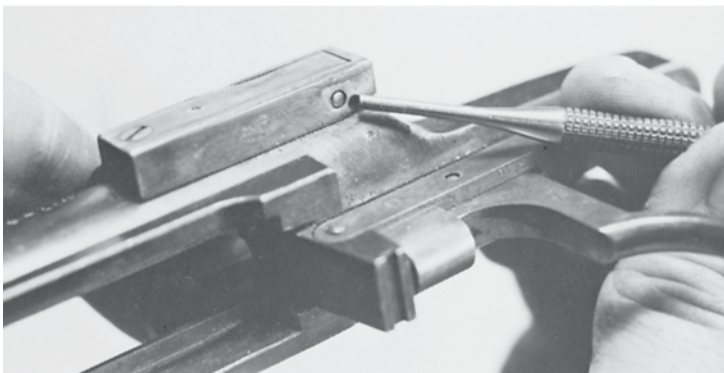
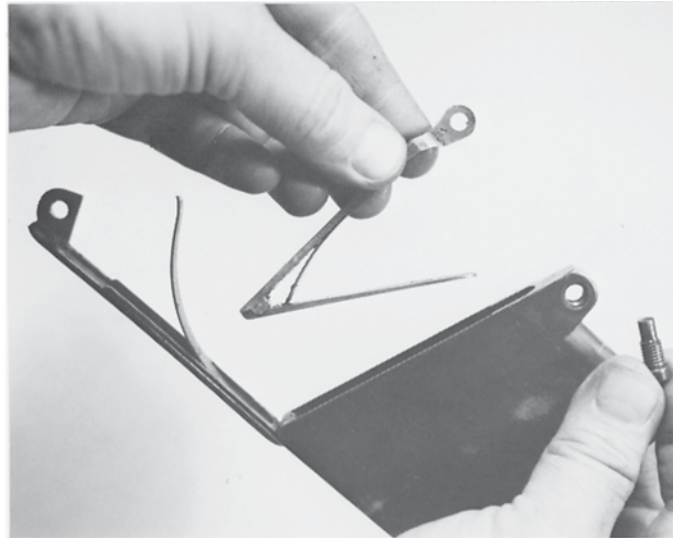


- 10.** Remove the trigger guard and magazine downward, and separate the action from the stock.

- 11.** Depress the magazine latch in the front of the trigger guard, and remove the magazine downward. The magazine latch and its spring are retained in the guard by a cross pin.



- 12.** Remove the cross screw at the front of the magazine, and swing the floorplate all the way open. The follower arm and its attached spring and follower are then easily removed, and the parts separated by drifting out the cross pins and sliding the springs from their recesses.



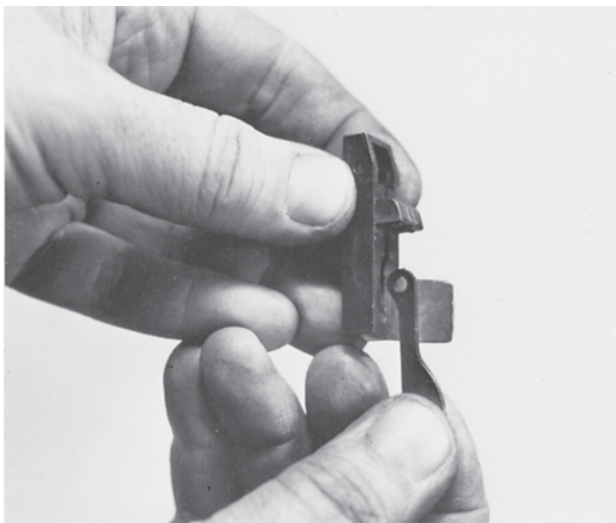
- 13.** The bolt stop is retained by a vertical pin at the left rear of the receiver, and the pin should be drifted out upward.



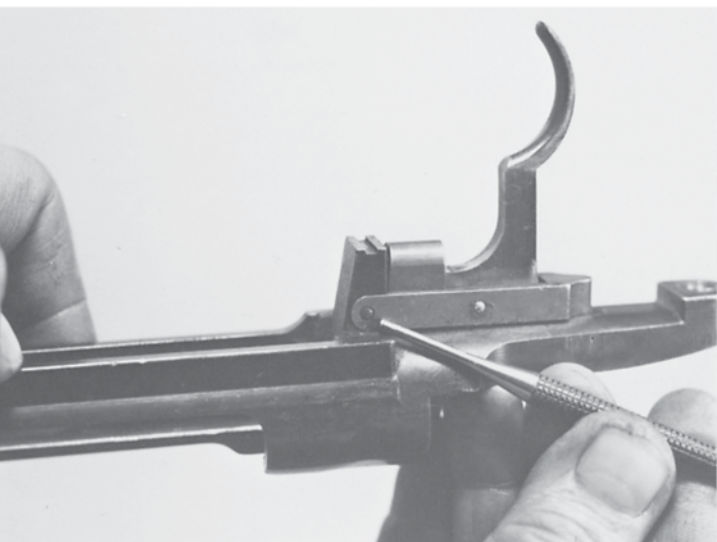
- 14.** Remove the bolt stop assembly toward the left.

18 : Argentine Model 1891 Mauser

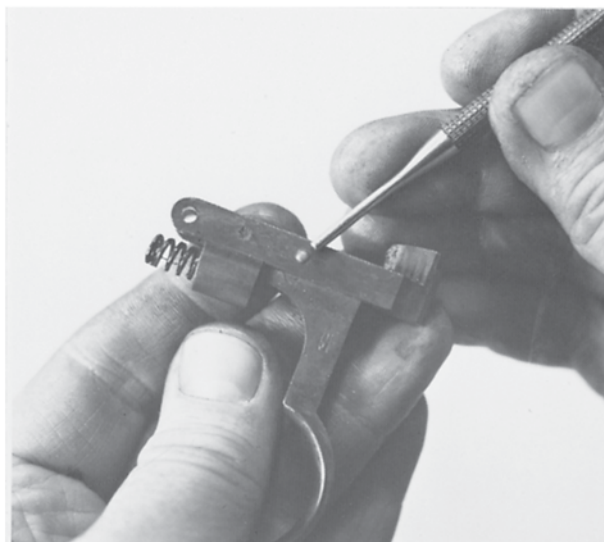
- 15.** Remove the ejector from the bolt stop by pulling it out toward the front.



- 16.** The bolt stop and ejector spring can be removed by backing out its screw, then sliding the spring out toward the front.



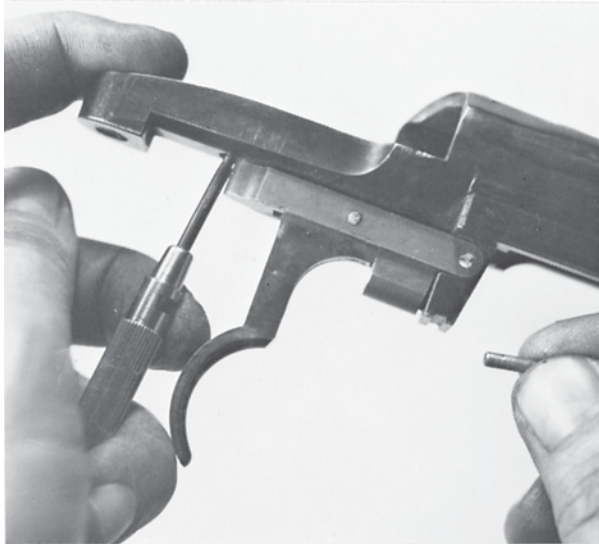
- 17.** Drift out the sear cross pin, and remove the sear and trigger assembly toward the rear and downward.



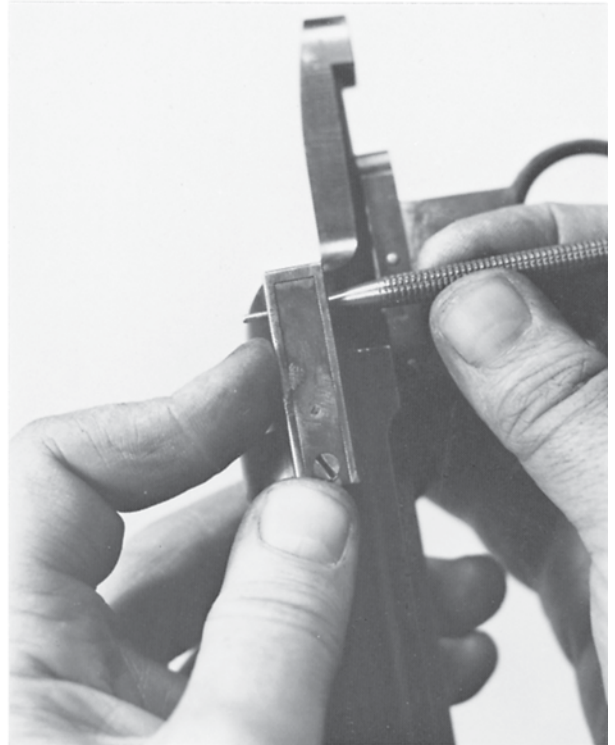
- 18.** Pushing out the trigger cross pin will allow separation of the trigger from the sear.

Reassembly Tips:

1. When replacing the sear and trigger assembly, insert a screwdriver behind the sear to lever it forward for insertion of the cross pin.



2. Before replacing the bolt stop retaining pin, insert a tapered drift punch to insure alignment of the ejector inside the bolt stop.



3. When replacing the bolt sleeve on the rear of the striker shaft, note that the shaft has a guide rib, and this must be aligned with a corresponding keyway inside the bolt sleeve.



Austrian Mannlicher Model 1895

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Austrian Mannlicher Model 1895 also apply to the following guns:

Austrian Mannlicher

Model 1895 Cavalry Carbine

Austrian Mannlicher

Model 1895 Short Rifle

Bulgarian Model 1895

Bulgarian Model 1895M

Hungarian Stutzen Model 31

Yugoslavian Model 95M

Data: Austrian Mannlicher
Model 1895

Origin: Austria

Manufacturer: Osterreichische Werke
Gesellschaft, Steyr

Cartridge: 8x50mmR Austrian
Mannlicher

Magazine capacity: 5 rounds

Overall length: 50 inches

Barrel length: 30.12 inches

Weight: 8.31 pounds

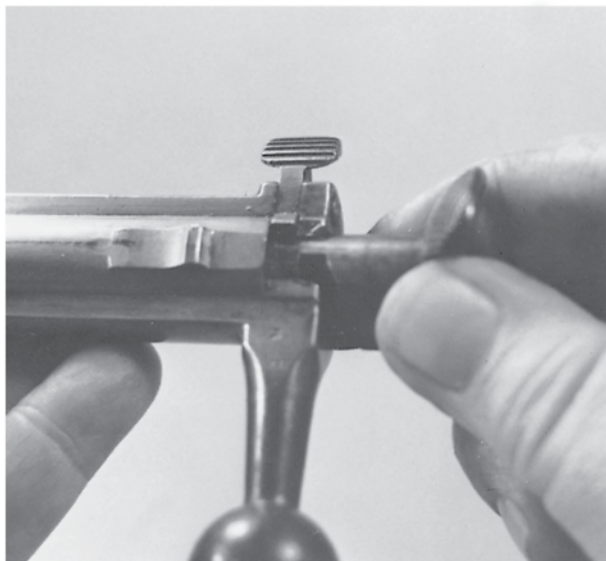
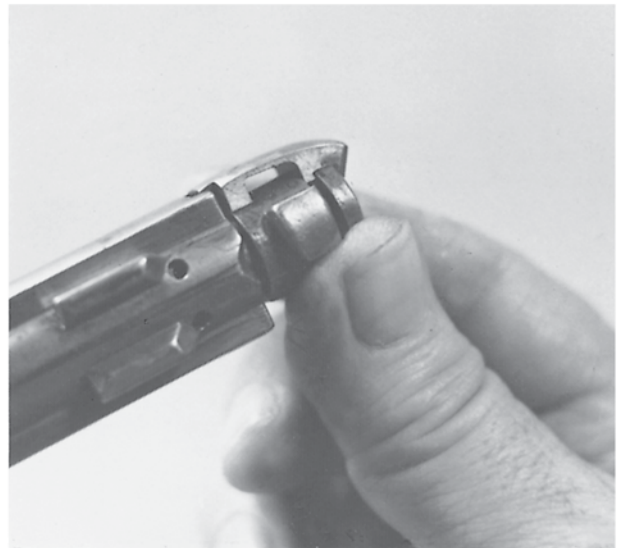
The Model 1895 was used by the Austro-Hungarian forces as a standard service rifle through World War I, and from 1897 it was also used by Bulgaria. The gun shown in our takedown sequence is the Bulgarian version. Mechanically, there is no difference. Some of these guns were arsenal-converted from their original 8x50mmR (or, later, 8x56mm) chambering to the German 8x57mm round. These are marked "M95M" on the receiver ring.

Disassembly:

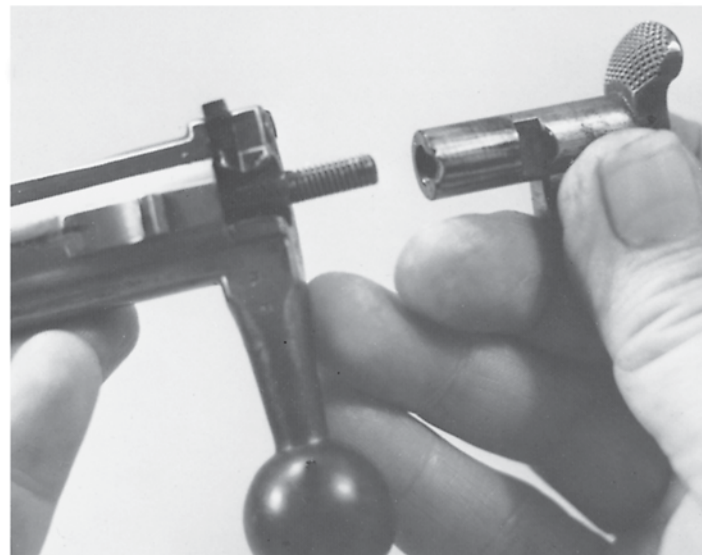
1. Open the bolt, push the trigger forward, and remove the bolt toward the rear.



2. Turn the bolt head counter-clockwise (front view), into its locked position. If the head is very tight, use a screwdriver in the ejector slot to lever it.



3. Pull the cocking piece to the rear and unscrew it counter-clockwise (rear view), keeping rearward pressure so the sear-contact lug will clear the safety screw on each turn. Note that the screw-slotted tip of the striker shaft at the center of the cocking piece is not a screw, so do not attempt to turn it.



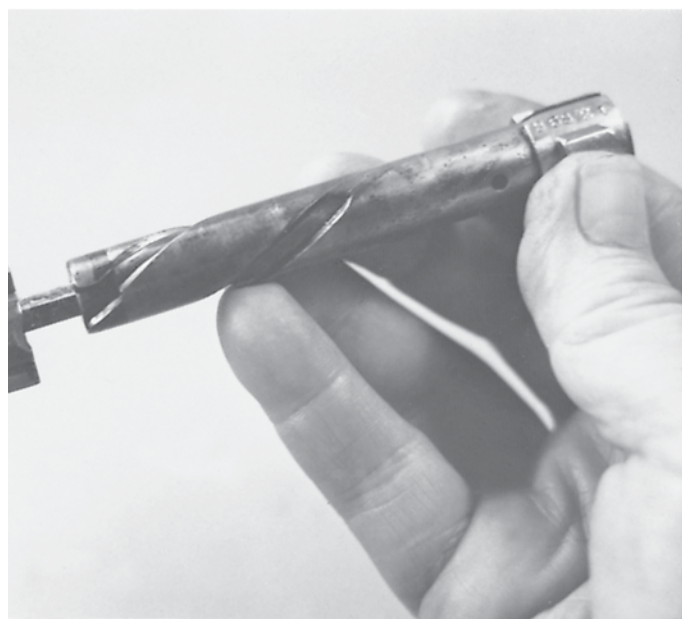
4. Remove the cocking piece toward the rear.

22 : Austrian Mannlicher Model 1895

5. Turn the bolt head clockwise (front view) until the smaller bolt lug passes beneath the extractor.



6. When the bolt head is turned to the position shown, remove the extractor toward the front.

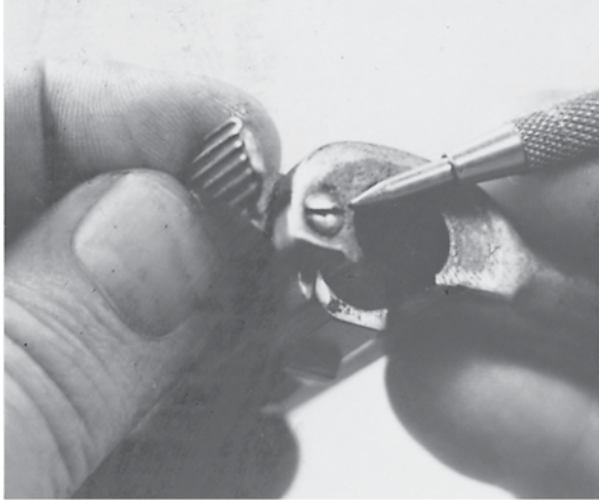


7. Remove the bolt head and striker assembly toward the front.



8. The striker and its spring can be removed from the bolt head by unscrewing the nut at the rear of the bolt head. **Caution:** The spring is under tension, so keep control of the nut as it is removed.

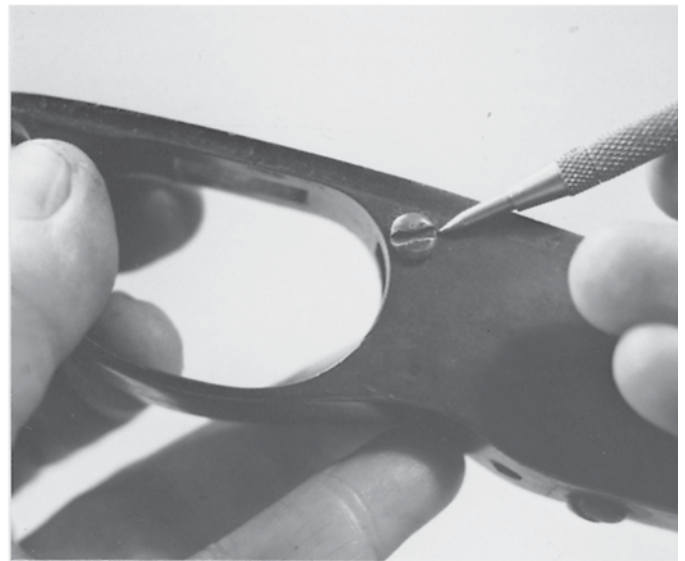
- 9.** The safety is pivoted and retained at the rear of the bolt body by a small screw.



- 10.** If the rifle has its full-length military stock, remove the front end piece and the barrel band. Remove the large screws on the underside at the front and rear of the magazine housing/guard unit.

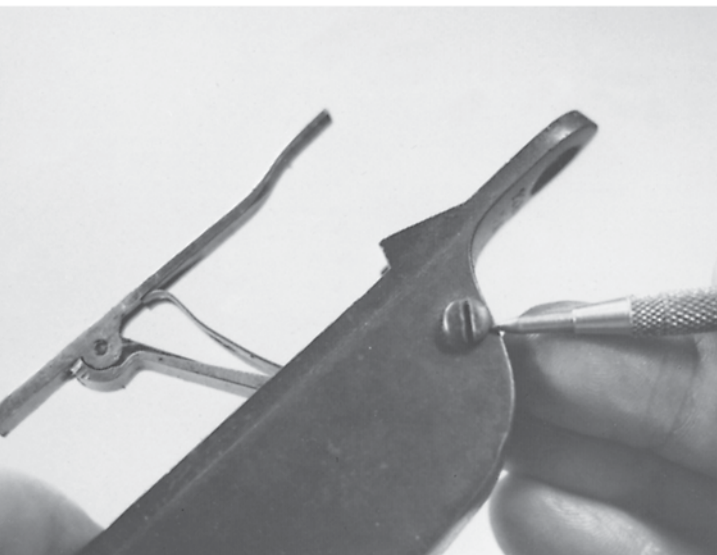


- 11.** Remove the magazine housing/trigger guard unit downward.



- 12.** The screw at the rear of the housing retains the clip latch and its attached blade spring. After removal of the screw, this unit is taken out upward.

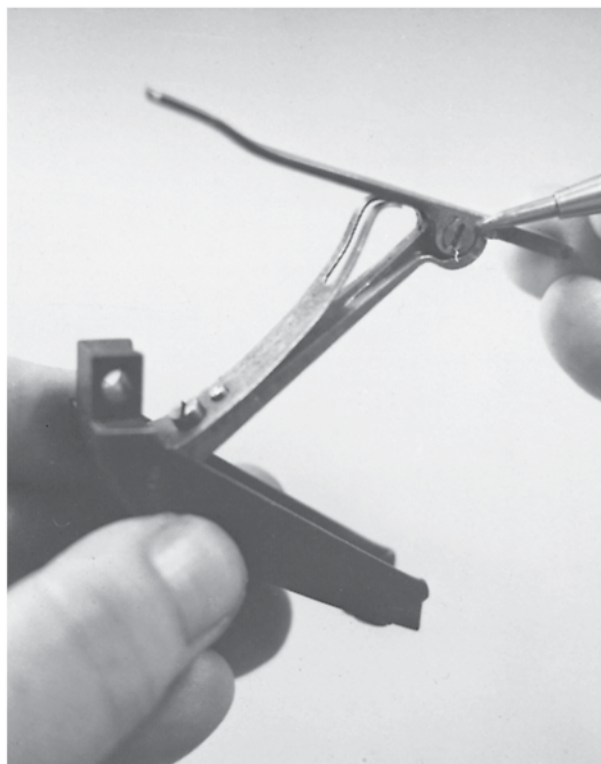
- 13.** Remove the front cross screw in the housing.



- 14.** Remove the magazine sub-frame downward.

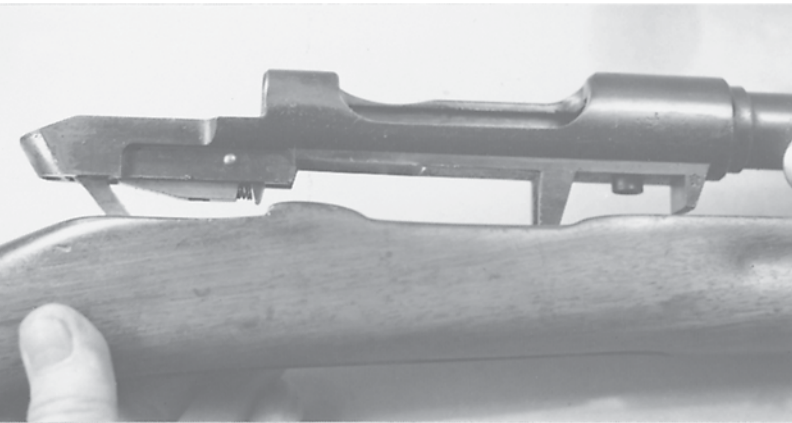


- 15.** The mainspring for the magazine system is retained by a large screw on the underside of the housing. The magazine follower arm is pivoted and retained by a cross pin, which is pushed out toward the right.



- 16.** The magazine follower and its spring are retained on the arm by screws.

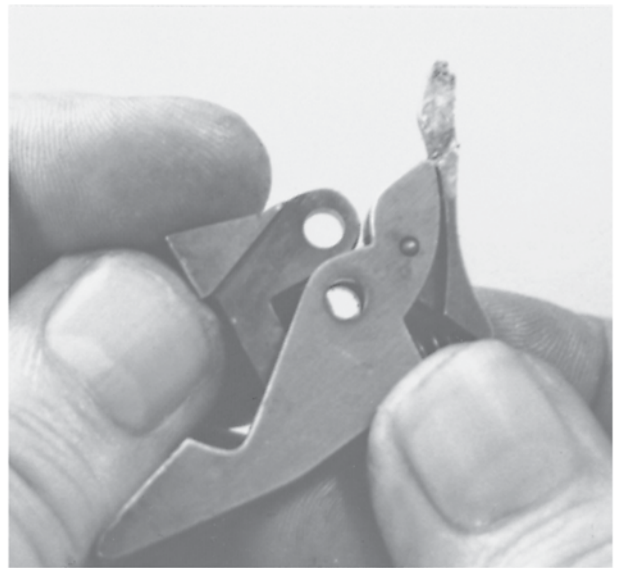
17. Remove the action from the stock.



18. Push out the cross pin of the trigger and sear system toward the left.

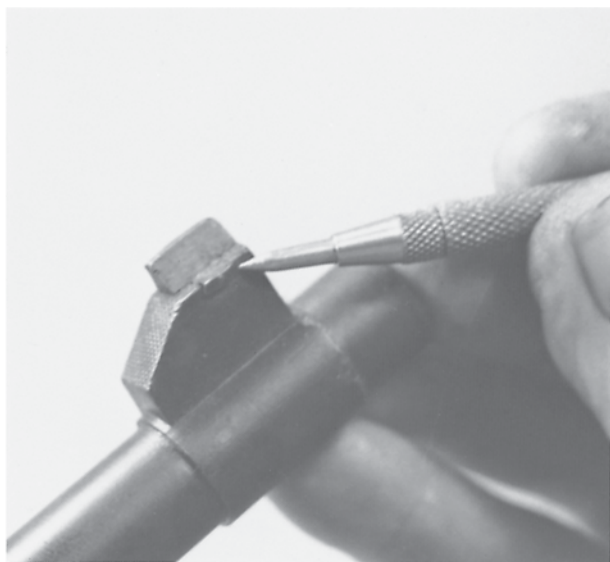
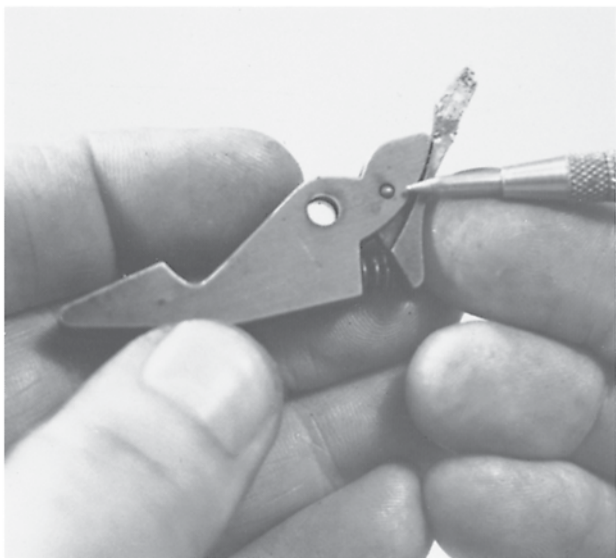


19. Remove the trigger and sear system downward. The trigger is a free unit, and will detach as the system is taken off.



20. Remove the sear upward.

- 21.** Removal of the small cross pin in the forward extension of the sear lever will release the ejector and the combination sear and ejector spring.



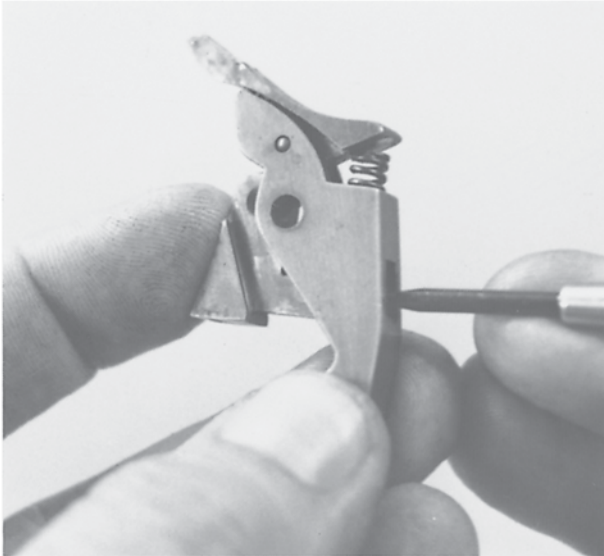
- 23.** The front sight is dovetail-mounted, and is drifted out toward the right for removal.

- 22.** To remove the rear sight, drift out the pivot cross pin. The adjustment slide can then be taken off the sight, and the blade spring can be pushed out of its mount.



Reassembly Tips:

1. If the sear has been removed and the ejector and combination spring are still in place, it will be necessary to insert a tool to depress the spring as the sear is reinserted in the assembly.



2. If the striker and its spring have been taken out, note that on the final turn of the retaining nut the cuts in the nut must match the spiral track in the bolt head.



3. When replacing the bolt head in the bolt body, align the flat on the striker shaft, the ejector slot, and the bolt handle rib, as shown. When the bolt head spirals have engaged the lugs, insert the ejector. The bolt head must be in the extended position (unlocked) for reinsertion in the receiver.



British SMLE No. 1, Mark III

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the British SMLE No. 1, Mark III also apply to the following guns:

Australian SMLE No I, Mark III*

British SMLE No. I, Mark I*

British SMLE No. I, Mark I***

British SMLE No. I, Mark II

British SMLE No. I, Mark II**

British SMLE No. I, Mark III*

British SMLE No. I, Mark V

British SMLE No. 2, Mark IV* (22 RF)

British No. 4, Mark 1*

British No. 4, Mark 1/3

British No. 4, Mark 1* (T)

British No. 4, Mark 3

British SMLE Cal. 22 R.F. Short Rifle Mark III

Century International Arms Enfield Sporter No. 4

Indian SMLE No. I, Mark III* (Ishapore Arsenal)

British SMLE No. I, Mark I

British SMLE No. I, Mark I**

British SMLE No. I, Mark I Carbine

British SMLE No. I, Mark II*

British SMLE No. I, Mark II***

British SMLE No. I, Mark IV

British SMLE No. 2, Mark IV (22 RF)

British No. 4, Mark 1

British No. 4, Mark 1/2

British No. 4, Mark 1 (T)

British No. 4, Mark 2

British No. 5, Mark 1

Data: British SMLE No. 1,
Mark III

Origin: England

Manufacturer: British military arsenals

Cartridge: 303 British

Magazine capacity: 10 rounds

Overall length: 44-1/2 inches

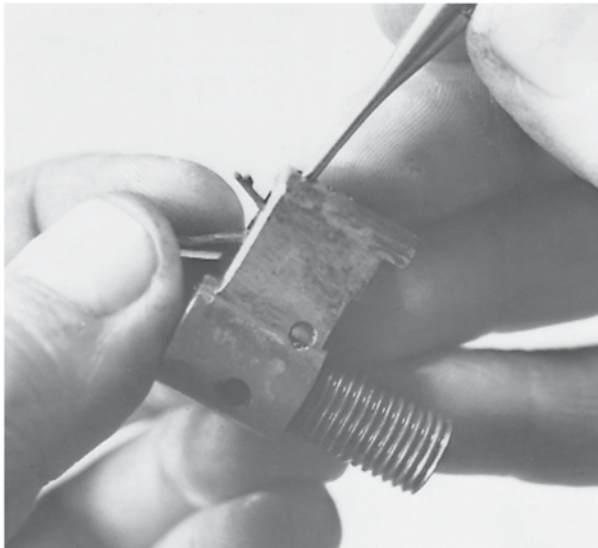
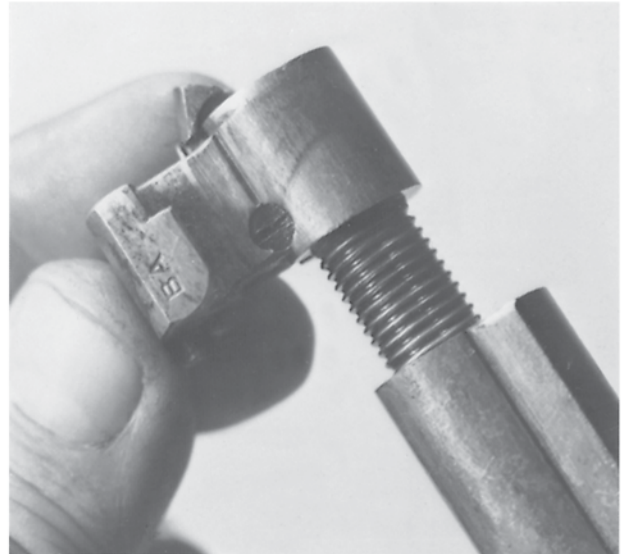
Barrel length: 25.19 inches

Weight: 8.62 pounds

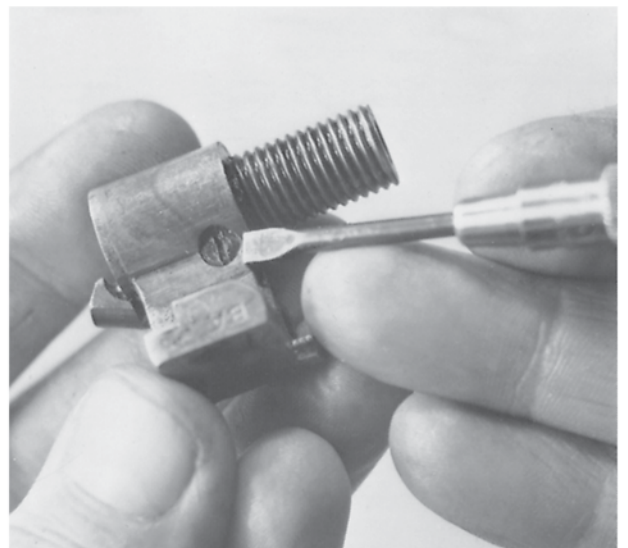
In the bewildering array of “numbers” and “marks,” the Lee-Enfield rifle was the mainstay of the British military from 1895 to 1951. One version that is familiar to most U.S. shooters is the No. 1, Mark III rifle, as many of these were sold as surplus after World War II. For the benefit of those who came in late, “SMLE” is an abbreviation for “Short, Magazine, Lee-Enfield.” Although the rifle was replaced in British service by the semi-auto L1A1 (FN-FAL) in 1951, the old SMLE is still in use in many former British colonies and in other parts of the world.

Disassembly:

1. Remove the magazine. Open the bolt, and move it all the way to the rear. Lift the bolt head lug on the right side, disengaging it from the detent spring on the receiver, and turn it up to vertical position. Withdraw the bolt from the rear of the receiver. Some amount of pressure may be needed to turn the bolt head, but be sure that the bolt is fully to the rear before exerting force.
2. The bolt head is removed by simply unscrewing it from the front of the bolt, counter-clockwise (front view).

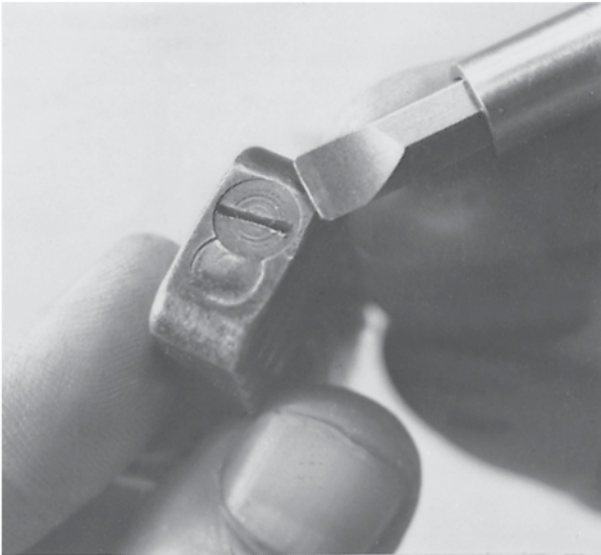


3. Insert a small-diameter tool in the hole in the outer surface of the bolt head lug, and push gently inward to disengage the extractor spring stud from its recess. The spring can then be pushed out toward the front.
Caution: The spring is under tension. Control it, and ease it out.



4. The extractor is retained in the bolt head by a cross screw. After the screw is taken out, the extractor is removed toward the front.

5. Remove the screw in the rear face of the cocking piece, at the rear of the bolt.

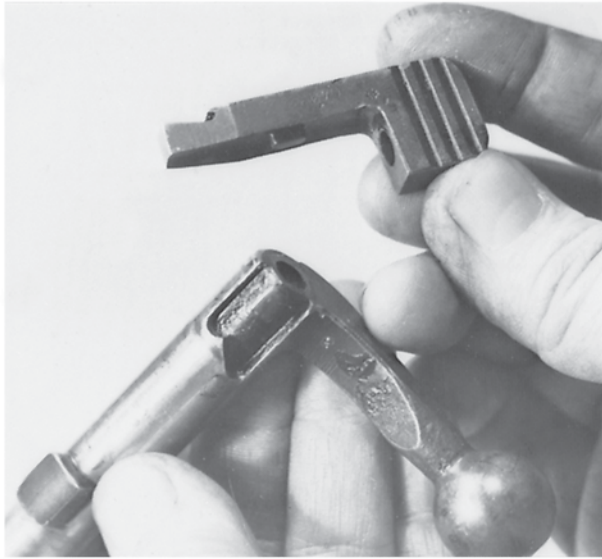


6. Removal of the striker/firing pin unit requires a special tool, easily made from brass or steel tubing having a $\frac{3}{8}$ -inch outside diameter. The working end of the tool is filed as shown in step 7, leaving twin projections which are designed to engage the recesses on the striker collar. The tool is inserted into the front of the bolt, and the striker unit is unscrewed from the knob at the rear. **Caution:** Keep firm inward pressure during this operation, as the tension of the striker spring will be released when the threads are cleared.

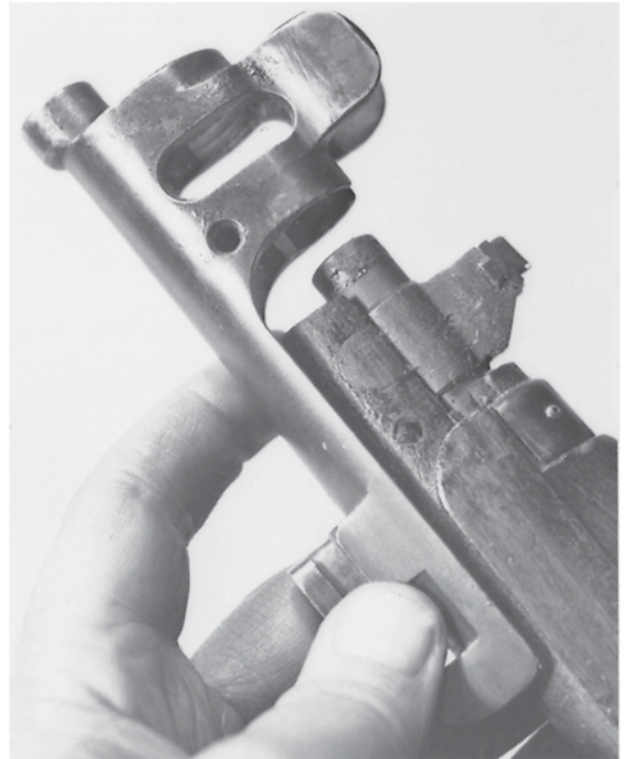


7. Remove the striker and its spring from the front of the bolt.

- 8.** When the striker is released toward the front, the cocking knob will be freed at the rear, and will simply drop off.



- 9.** Remove the cross screw from the stock nose-cap. Remove the vertical screw on the underside of the nose-cap, located just to the rear of the bayonet mount. Then remove the stock nose-cap toward the front.



- 10.** Remove the vertical screw on the underside of the stock, just forward of the magazine well.

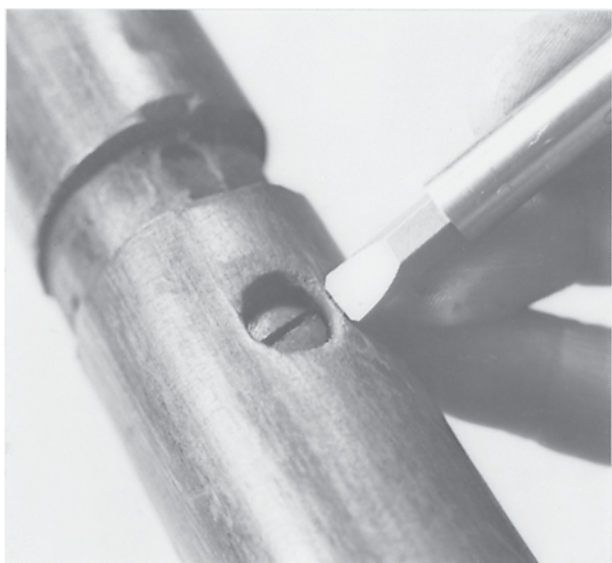
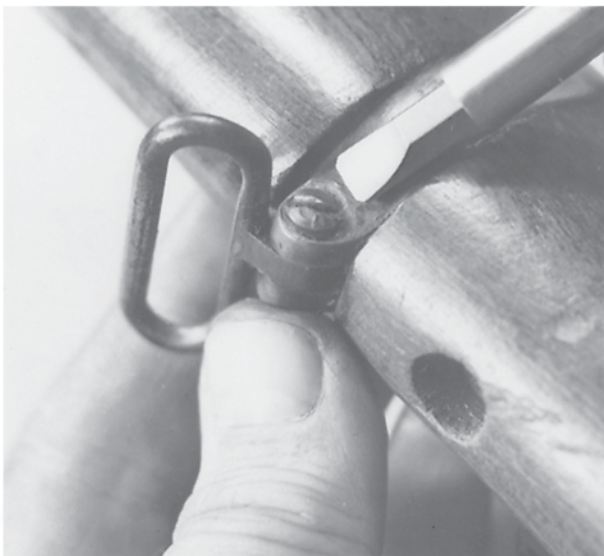
- 11.** Remove the cross screw at the rear of the trigger guard, and take off the trigger guard unit downward and toward the rear.



- 12.** Pushing out the cross pin will release the trigger for removal upward.



- 13.** Remove the cross screw in the rear stock/barrel band, releasing the sling loop, and spread the band (it is hinged at the top) for removal upward. This will allow the front handguard wood to be taken off toward the front and upward.



- 14.** Remove the vertical screw on the underside of the stock, just to the rear of the rear band. The front lower section of the stock can now be moved forward and taken off.



- 15.** Remove the forend stud and its spring from their well inside the stock, near the muzzle end.

- 16.** The rear sight guard is retained in the stock by a vertical screw, and is removed upward.

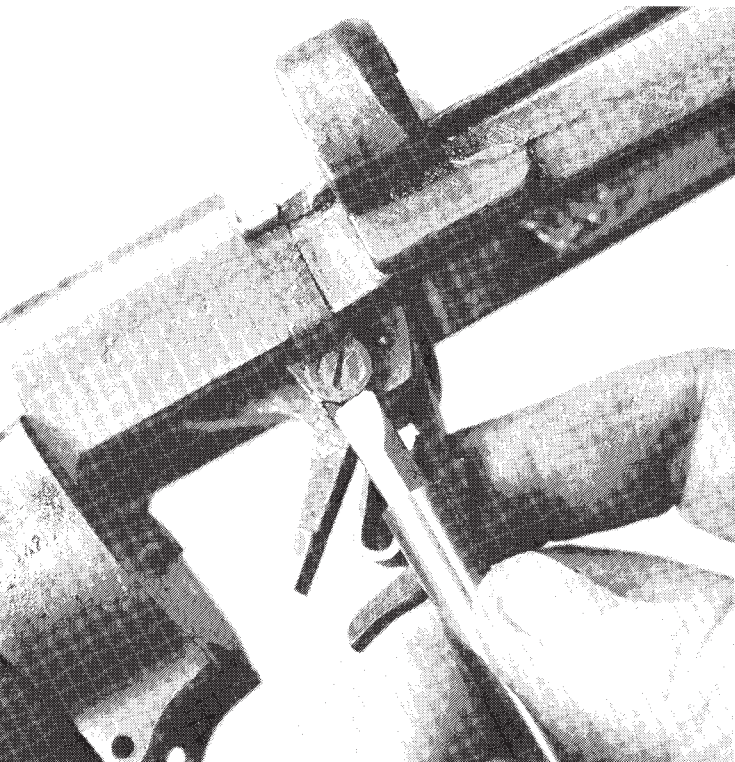


- 18.** The rear upper handguard wood is retained on top of the barrel by twin spring-clips, and is carefully snapped off upward toward the rear. Raise the rear sight when taking off the handguard, and take care not to break the two slim front handguard projections.

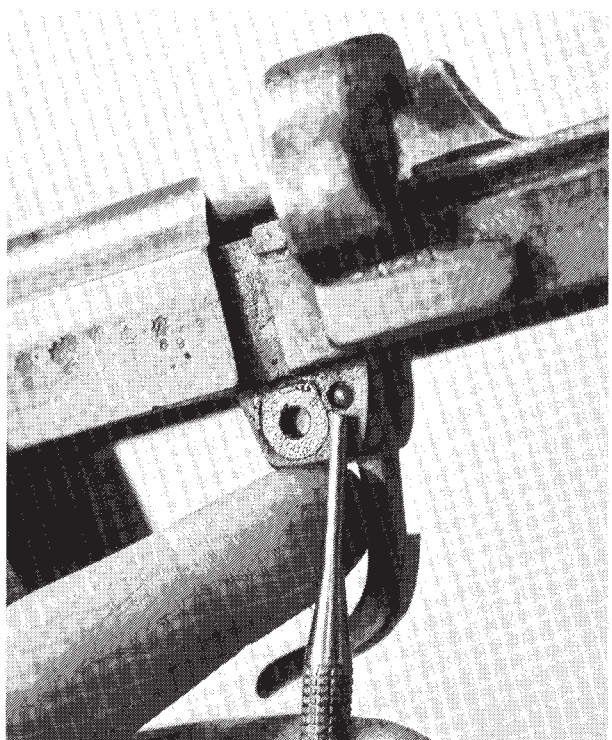
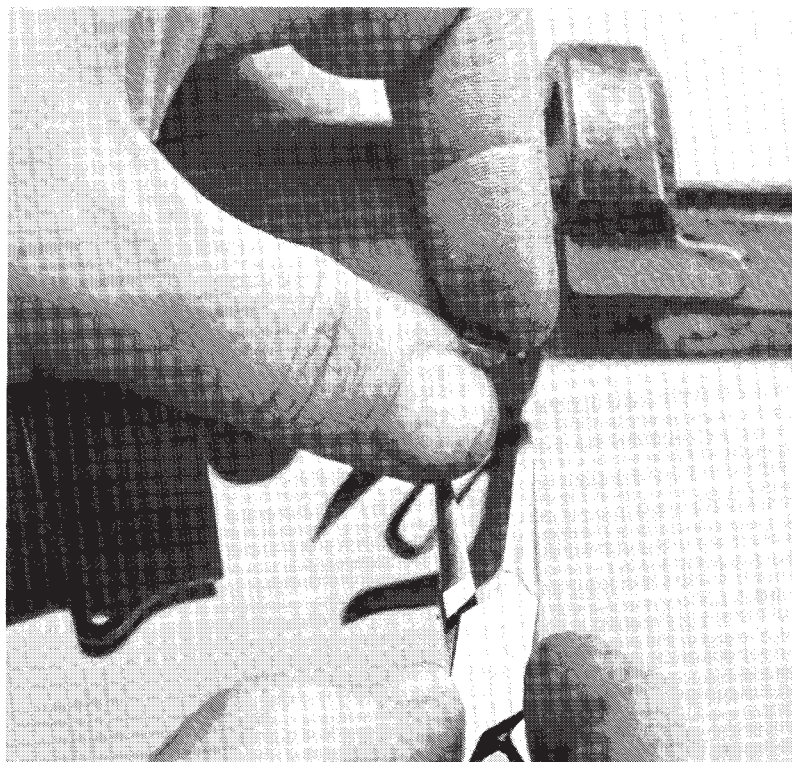
- 17.** If removal of the buttstock is necessary, you must first use a sharpened bent wire (such as an opened coat hanger) to extract the leather washer that covers the head of the stock bolt. After this is removed, use a B-Square stock tool or a large screwdriver to back out the stock bolt, and take off the stock toward the rear. Enfield stock bolts are often rusted in place, and some effort may be required to effect removal.



- 19.** Remove the screw on the right side of the receiver that retains the bolt head latch spring. This screw is also the pivot and retainer for the sear, and will release the sear and the combination sear and magazine catch spring for removal toward the rear and downward.

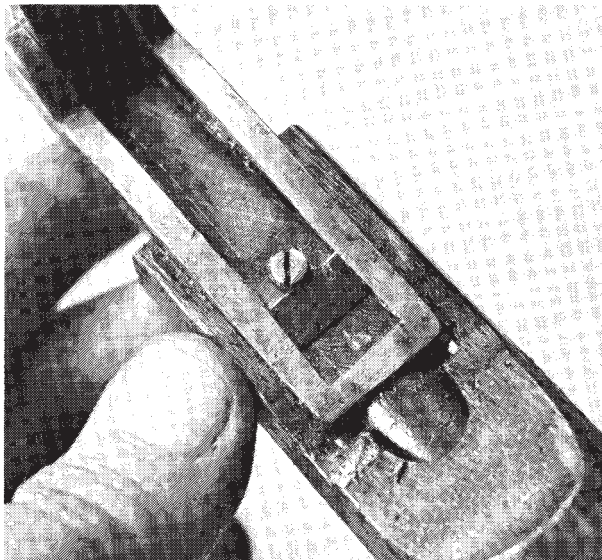


- 20.** After the screw has been partially backed out, use pliers to slightly compress the spring, as shown, to ease removal of the screw.

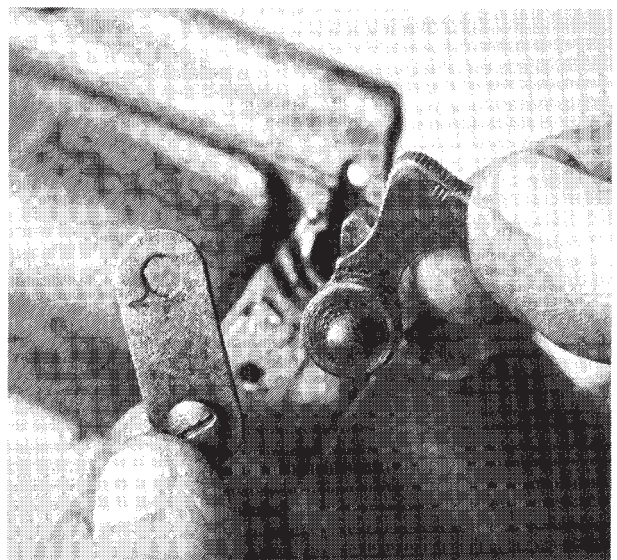


- 21.** Drifting out the cross pin will release the magazine catch for removal downward.

- 22.** Pivoting the rear sight up to the vertical position will expose the mounting screw for the rear sight spring. After the spring is removed, the cross pin can be drifted out to free the rear sight assembly. This pin is usually semi-riveted at each end, and is best left in place unless removal is necessary for repair.



- 23.** Removal of the screw at the lower end of the safety spring on the left side will allow the spring to be taken off, and the safety-lever and locking bolt can then be moved toward the left and taken out. The bolt lock piece is easily taken off the safety-lever shaft by turning it around the shaft.



Reassembly Tips:

When replacing the trigger guard assembly, be sure the upper arm of the trigger is inserted behind the lower arm of the sear.

When replacing the safety system, turn the bolt lock on its fast helical threads until it is against the inner face of the lever, and hold it in this position while reinserting the assembly into the receiver, with the lever in its off-safe position.

When replacing the extractor spring in the bolt head, be sure the rear elbow of the spring enters the outer hole at

the rear, and not the inner hole, where the extractor is pivoted.

When turning the striker shaft back into the cocking piece, be sure the rear tip of the shaft is level with the rear face of the cocking piece, as near as possible with proper alignment of the cut for the stop screw. This adjustment is critical, as it controls the protrusion of the firing pin point at the breech face. The protrusion should be no more than .055-inch and no less than .050-inch for proper primer contact.



Browning BAR

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the Browning BAR also apply to the following guns:

Browning BAR Shortrac

Browning BAR Longtrac

Winchester SXR

Data: Browning BAR

Origin: Belgium

Manufacturer: Fabrique Nationale, Herstal, for Browning Morgan, Utah

Cartridges: .243, .270, .280, .30-06, 308,
7mm Remington Magnum, 300 Winchester,
338 Winchester Magnum

Magazine Capacity: 4 rounds (3 in magnum)

Overall Length: 43 and 45 inches

Barrel Length: 22 and 24 inches

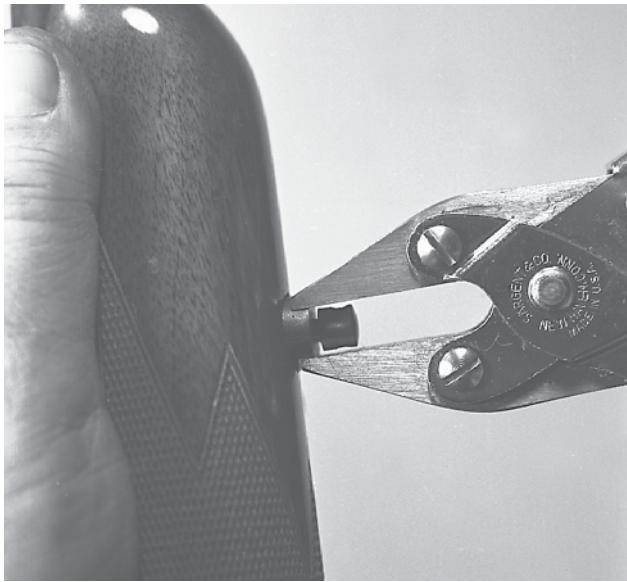
Weight: 7-3/8 and 8-3/8 pounds

The factory designation of this gas-operated semi-auto sporter has caused a little confusion, as the famed military selective-fire gun was also called the "BAR." The sleek sporting rifle was introduced in 1967, and it is still in production. The gun has been offered in several grades, the price depending on the extent of stock checkering, carving, engraving, and inlay work. Regardless of the grade, the mechanical details are the same, and the instructions will apply.

It should also be noted that the Browning Longtrac, Shortrac, and Winchester SXR rifles are essentially modernized versions of the BAR. Disassembly is almost the same, with minor changes in parts design and such. Most notably, the new versions no longer employ the action rod support rails seen in the standard BAR. The takedown directions should otherwise suffice for these newer variants.

Disassembly:

1. With the empty magazine in place, pull back the cocking handle to lock the bolt in open position. With a small wrench or a pair of smooth-jawed pliers, unscrew the front sling swivel base on the underside of the forend near the forward end.



2. Tip the front of the forend downward until firm resistance is felt, then move it forward and off. Do this carefully, and use no extreme force, or the forend will be damaged.



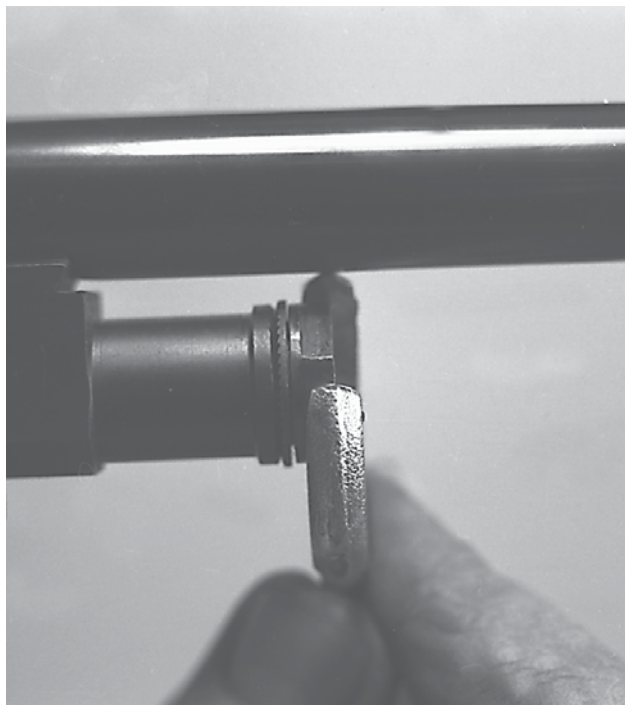
3. Slide the right and left action rod support rails out of the receiver toward the front, and remove them.



4. Disengage the forward ends of the action bars from the studs on the sides of the inertia block, and take the bars out toward the front.



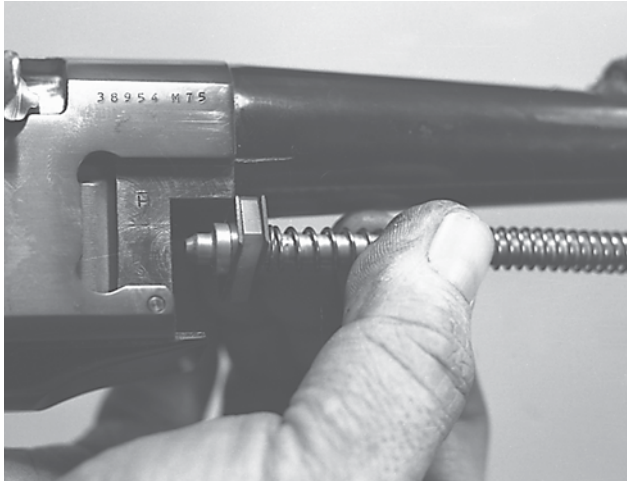
5. Remove the gas regulator from the front end of the gas cylinder. A 5/8"-inch open-end wrench will fit the side flats of the regulator, and it is simply unscrewed. Be sure the wrench is properly engaged to prevent marring. Take care not to lose the lock washer behind the gas regulator.



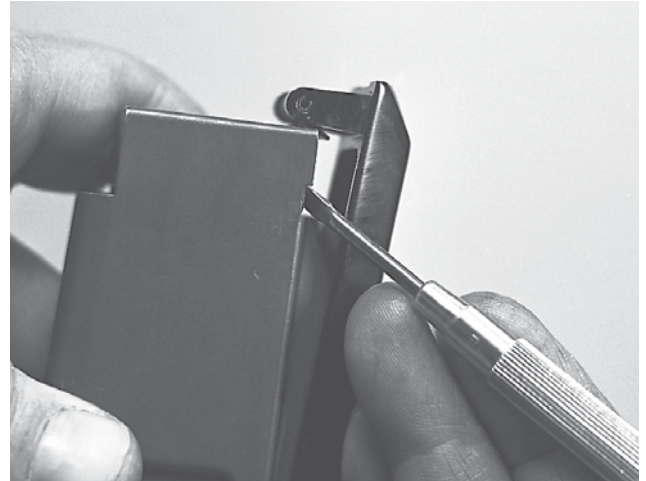
6. Remove the gas piston toward the front. If the piston is very tight, it may have to be nudged from the rear with a drift punch. If this is necessary, be very careful, as any burrs raised will cause the system to malfunction. If the piston won't move with the use of reasonable force, soak it for a time in a good powder solvent or penetrant.



7. Firmly grip the action spring guide at the rear, and lift its rear tip out of its seat in the front of the receiver. Remove the guide, spring, and inertia block toward the rear. **Caution:** *Keep a firm grip on the partially compressed spring, and ease it off.*

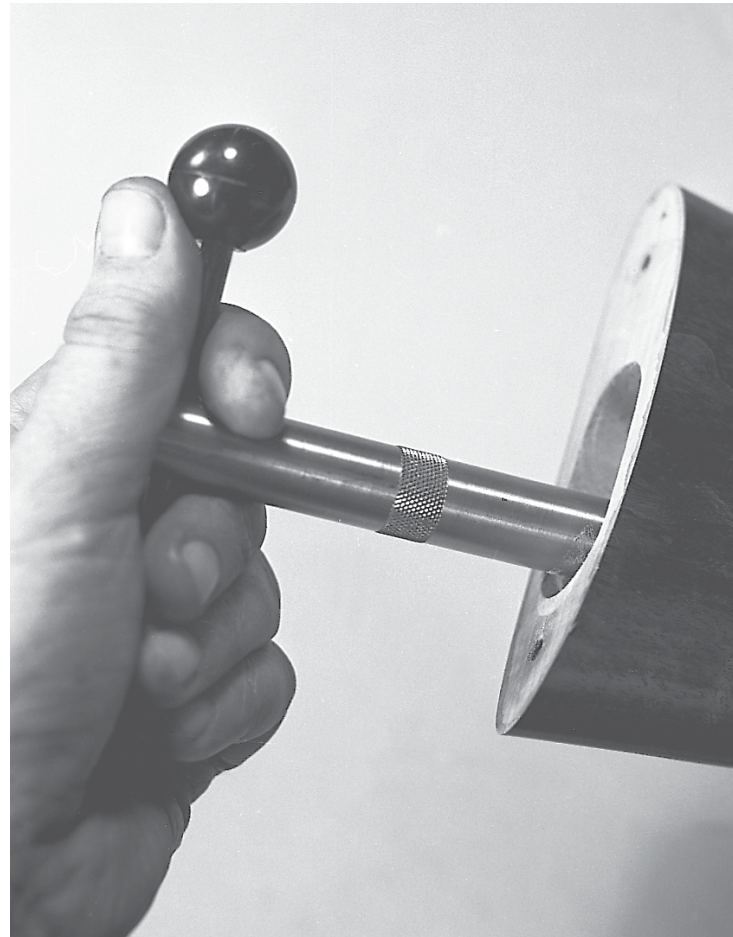


8. Open the magazine floorplate, and insert a small screwdriver at the rear of the magazine to pry it away from the floorplate. Remove the magazine from the floorplate.



9. The magazine retaining spring is mounted on the end of the floorplate by a cross pin, and is easily removed. the floorplate is attached to the receiver by a cross pin, and the floorplate spring is mounted around the pin. Restrain the spring when drifting out the cross pin, and remove the floorplate downward.

10. Remove the buttplate to give access to the stock mounting bolt. Use a B-Square stock took or a long screwdriver to remove the stock mounting bolt, and take off the stock toward the rear. If it is very tight, bump the front of the comb with the heel of the hand to start it.



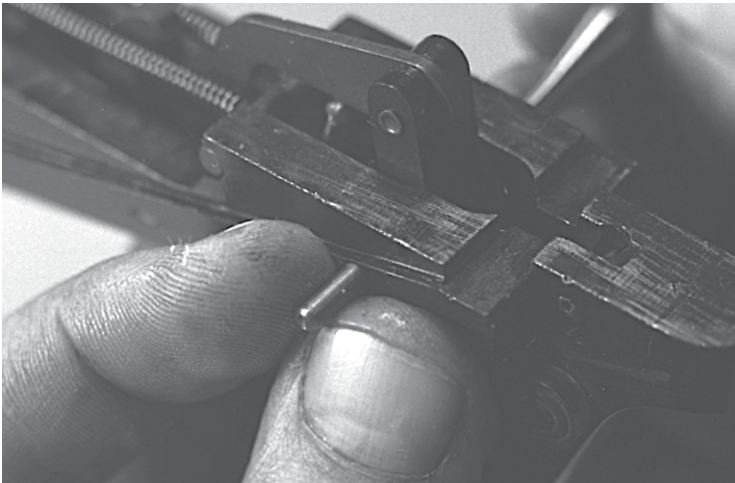
- 11.** Insert a drift punch into the hole in the stock mounting plate at the rear of the receiver, and lift the plate upward, then tip it and remove it toward the rear.



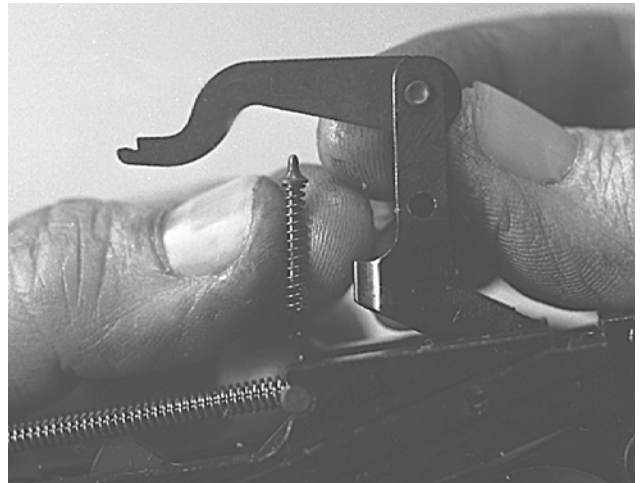
- 12.** Slide the trigger group out of the receiver toward the rear.



- 13.** Restrain the hammer, pull the trigger, and ease the hammer down to the fired position. Drift out the trigger cross pin.



- 14.** Remove the trigger and the attached disconnecter upward, and take out the disconnecter spring and its plunger. The cross pin that joins the disconnecter to the trigger is riveted in place, and should be removed only for repair or replacement purposes.



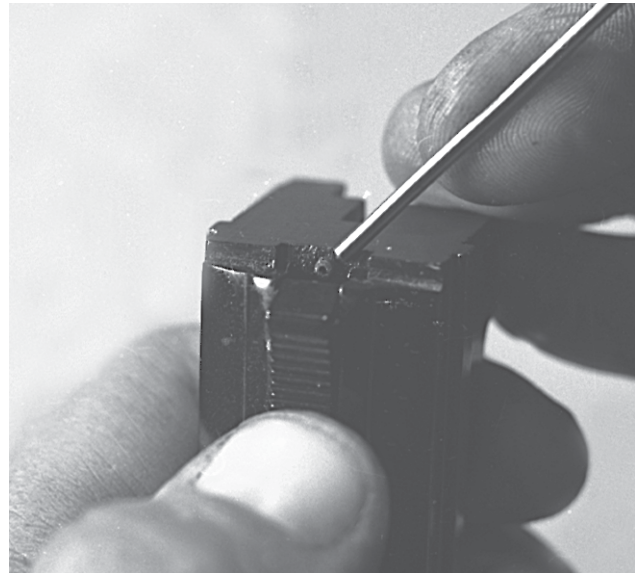


15. Push out the sear cross pin, move the sear forward, then remove it upward.

16. Insert a screwdriver behind the base for the twin hammer springs and lever it forward and upward, out of its seats in the trigger group. **Caution:** Grip the ends of the base firmly during this operation, and control its movement, as the semi-compressed double springs are quite strong. Remove the spring base, springs, guide rods, and the front base in the hammer.



17. Push out the hammer cross pin, and take out the hammer upward.



18. The magazine floorplate latch is retained in the receiver by a vertical roll pin, and this pin need not be drifted completely out to free the latch and spring. Just drift it upward enough to clear the latch, and take out the latch and spring toward the front.

- 19.** A roll cross pin at the rear of the trigger group retains the safety plunger and spring. Restrain the spring at the top when drifting out the pin, and remove the spring and plunger upward. Remove the safety toward either side.



- 20.** Move the bolt so the operating handle is accessible in the ejection port, and insert a small screwdriver to lift the handle latch outward. Move the handle forward, out of its recess in the bolt.



- 21.** Move the operating handle to the wider opening in the bolt cover, and remove the handle toward the right. The latch and spring are retained in the handle by a very small cross pin, and are easily removed. In normal takedown, they are best left in place.

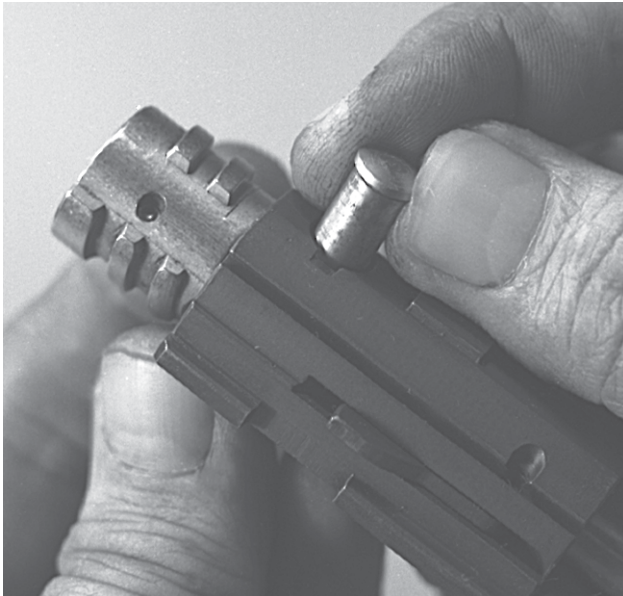
- 22.** After the handle is removed, move the bolt assembly about half-way to the rear, bring it downward from the roof of the receiver, and take it out toward the rear.



- 23.** Move the bolt cover to the rear of the bolt, and push upward on the right lower edge, tipping it over toward the left, and snapping its guide flange out of the groove on the bolt.



- 24.** Drift out the cross pin in the rear tail of the bolt, and take out the firing pin and its return spring toward the rear. The ends of the cross pin are contoured with the bolt tail, and care should be taken not to deform the ends.

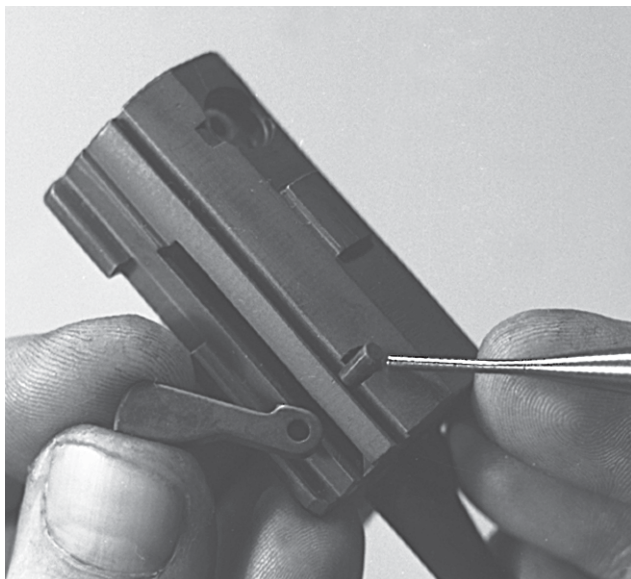


- 25.** Push the cam pin upward out of the bolt sleeve, and remove it.

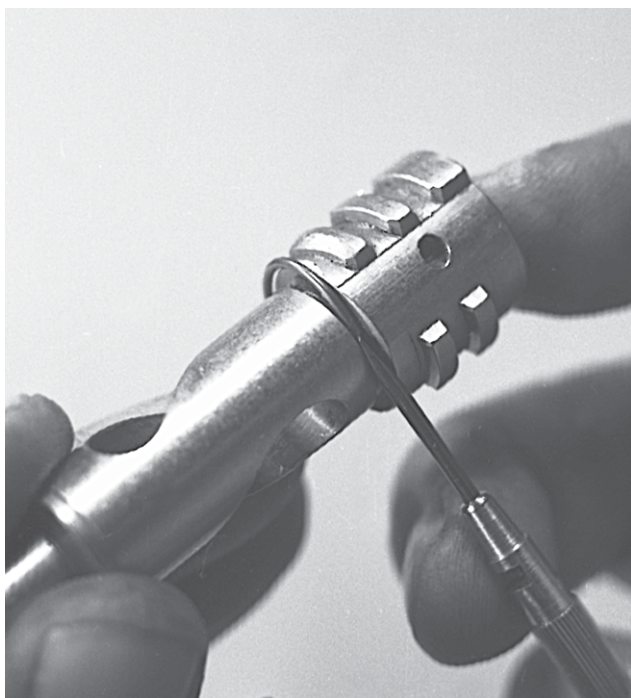
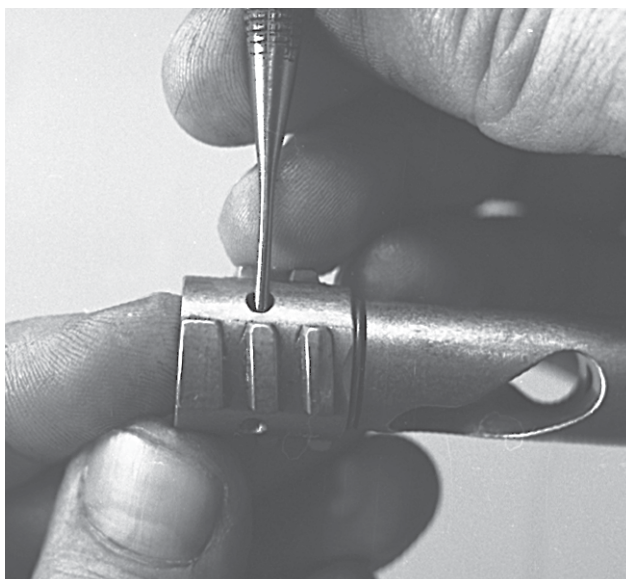
- 26.** Move the bolt forward out of the bolt sleeve.



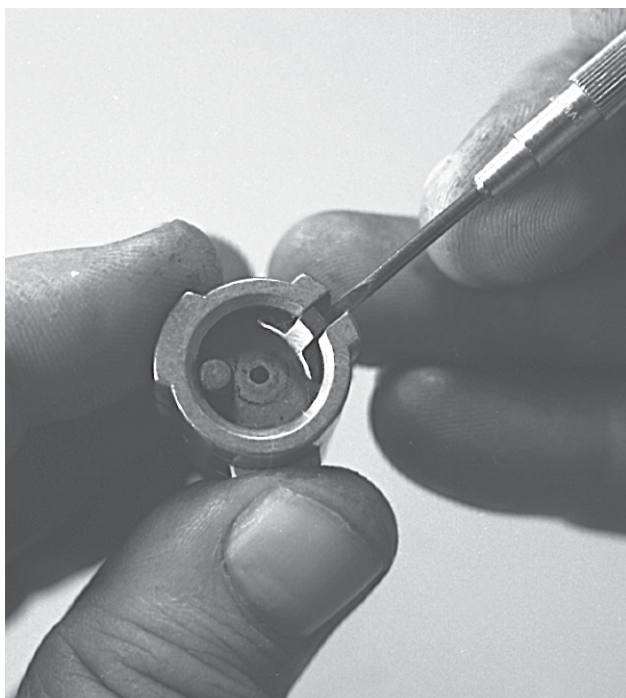
- 27.** Drifting out the vertical pin on the left side of the bolt carrier will allow removal of the timing latch toward the left. The pin must be removed upward.



- 28.** The ejector is retained at the front of the bolt by a vertical pin. **Caution:** *Restrain the ejector, and ease it out after the removal of the pin, as the ejector spring is compressed.*



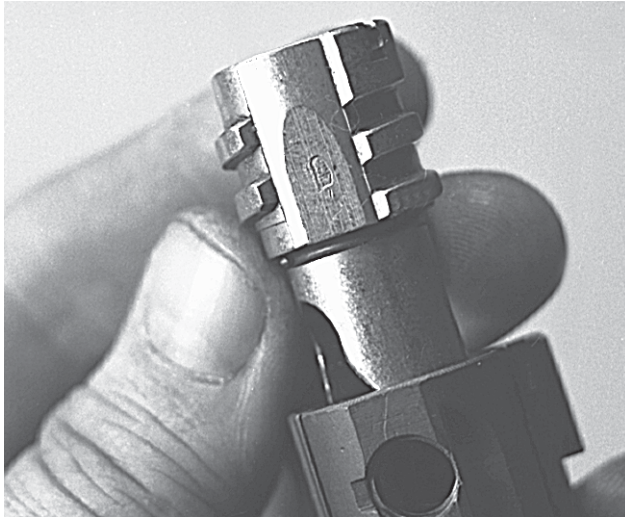
- 29.** Use a small screwdriver to push the extractor spring up out of its groove, and remove the spring toward the rear.



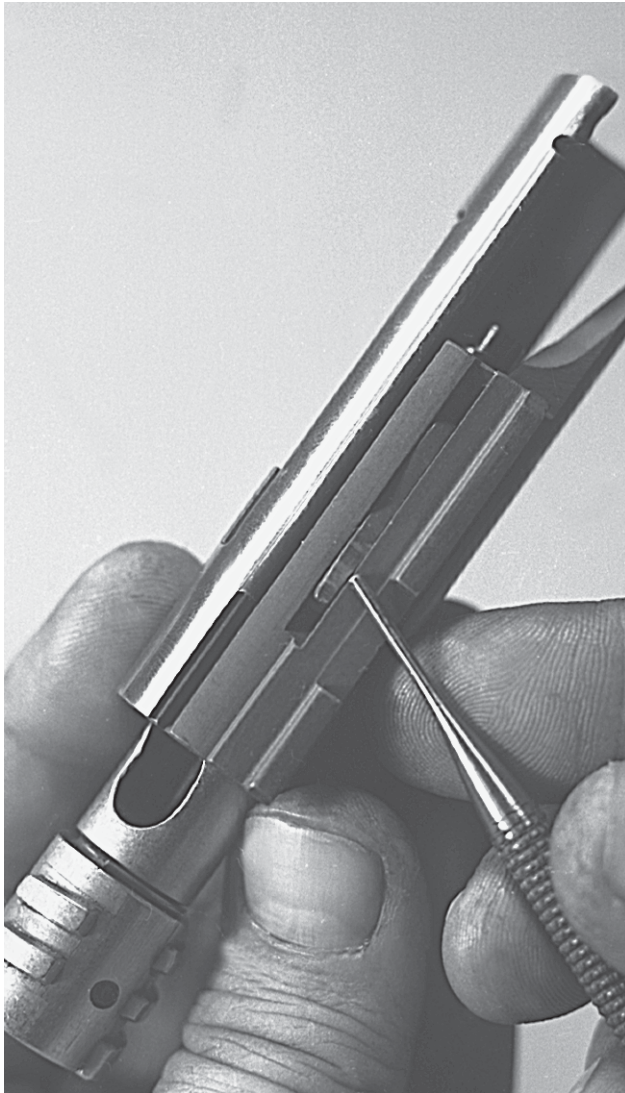
- 30.** After the spring is removed, the extractor can be moved downward, into the bolt face recess, and is taken out toward the front.

Reassembly Tips:

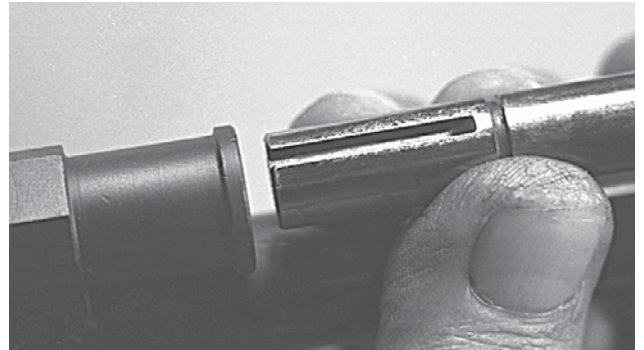
1. When replacing the bolt in the bolt carrier, be sure the flat between the bolt lugs is on *top*, and the extractor and ejector at upper left and lower right (front view).



2. When replacing the cam pin in the bolt and sleeve, the small hole at the center of the cam pin must be oriented properly for passage of the firing pin.



4. When replacing the gas piston, note that there is a guide pin at the lower rear of the gas cylinder, and the piston must be oriented so its rear groove will mate with the pin.



3. When replacing the bolt in the receiver, the blot must be at its forward position in the sleeve, to allow the timing latch to be retracted.



Browning BLR 81

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Browning BLR 81 also apply to the following guns:

Browning BLR

Browning BLR Long Action

Data: Browning BLR 81

Origin: Japan

Manufacturer: Miroku

Cartridge: 222, 223, 22-250, 243,
257 Roberts, 7mm-08,
284, 308, 358; in Long
Action: 270, 7mm
Remington Magnum, 30-06

Magazine capacity: 4 rounds

Overall length: 39-3/4 inches

Barrel length: 20 inches

Weight: 6 pounds, 15 ounces

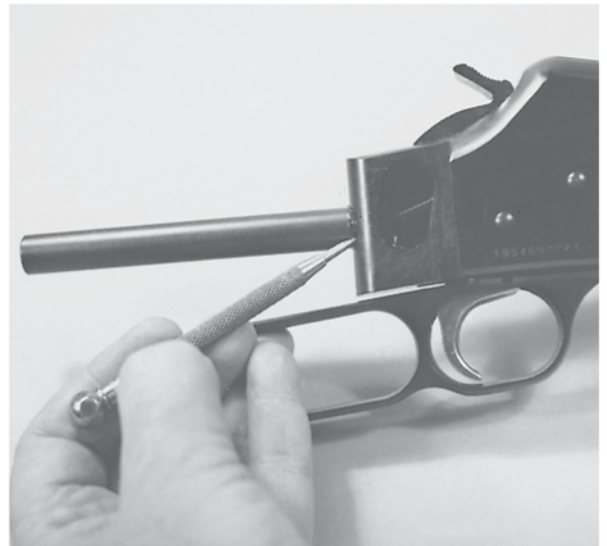
Introduced in 1971, the Browning Lever Action Rifle was made at the Fabrique Nationale factory in Belgium during the first year. Since 1972, it has been produced for Browning Arms by Miroku of Japan. A “Long Action” version was introduced in 1991 for cartridges with more length. In 1990 there was a slight modification of the internal portion of the lever system, but this does not affect the takedown sequence.

Disassembly

1. Remove the magazine. Back out the two screws in the recoil pad, and remove it. With a long-shanked screwdriver or a stock tool, as shown, unscrew the stock mounting bolt. Remove the buttstock toward the rear.



2. The housing that contains the hammer spring and its follower is screwed into the receiver at the rear. It is factory-sealed in place, and it is best not to remove it, as the takedown can proceed without disturbing it.

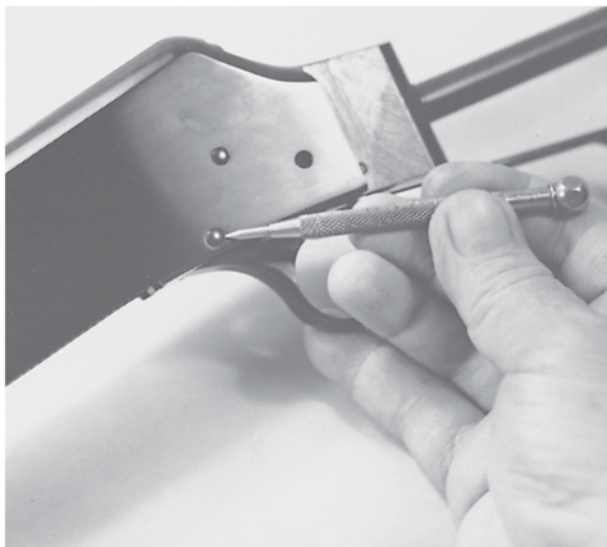


3. The three main cross pins in the receiver are splined at the right tip, and they must be driven out toward the right. These are large pins with domed heads, and a bronze drift of the proper size should be used to avoid marring. Drift out the hammer pivot pin toward the right.



4. Through the frame opening on the right, grip the hammer strut and move it rearward, then turn it upward at the front. Remove the hammer and the strut upward. The hammer spring follower will be stopped by a stud in the bottom of the receiver.

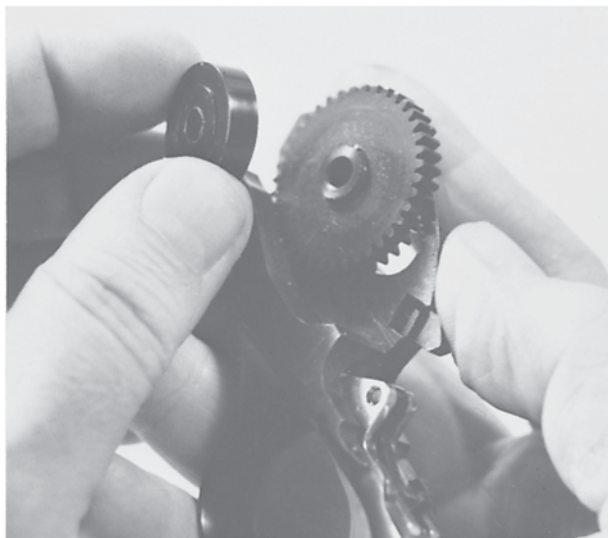
5. Drift out the lever pivot pin toward the right.



6. Drift out the bolt gear pin toward the right.

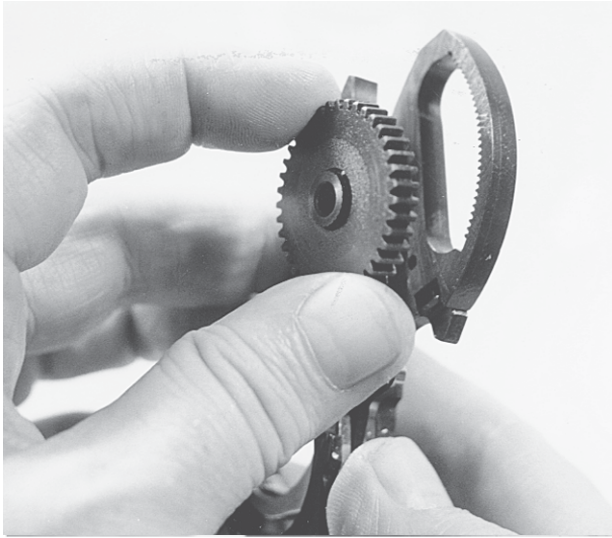


7. Remove the lever and bolt gear assembly downward.



8. Remove the bolt gear spacer disc from the gear.

- 9.** Remove the bolt gear from the lever assembly.

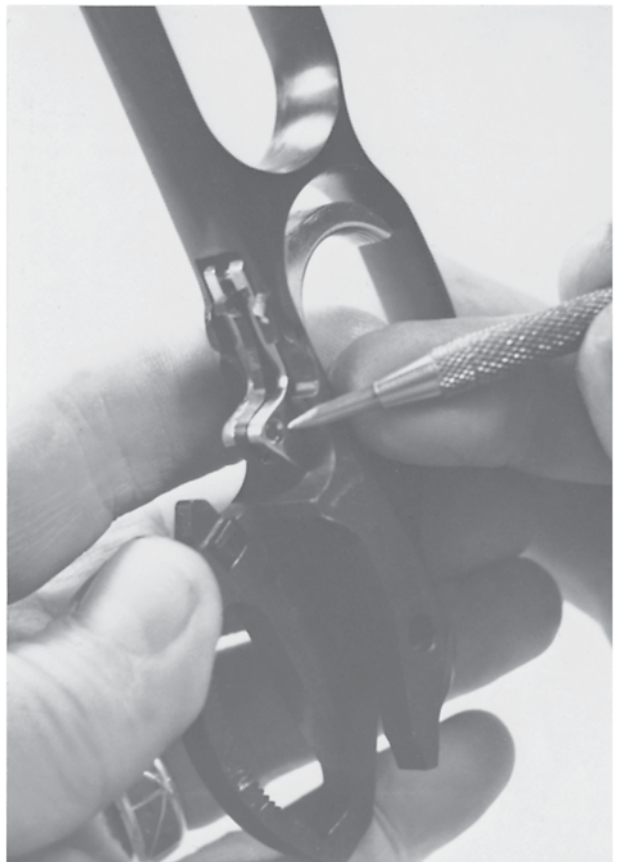


- 10.** The lever latch and its spring are retained in the lever by a roll pin. **Caution:** *The spring is powerful, so control the latch.*



- 11.** A cross pin retains the trigger assembly and the coil trigger spring.

- 12.** The sear connector is retained in the top of the trigger by a cross pin. If necessary for repair, the cross pin and the connector can be removed without taking the trigger out of the lever.



- 13.** There is a trigger adjustment screw in the lever. This is set at the factory, and changes in the adjustment should be done only by an authorized Browning repair station.



- 14.** Remove the bolt toward the rear.



- 15.** Turn the bolt head clockwise (front view) until it stops, and remove it toward the front.



- 16.** Remove the firing pin return spring toward the front.

- 17.** A roll pin retains the firing pin in the bolt. The firing pin is removed toward the rear.



- 18.** Tip the extractor outward for removal.

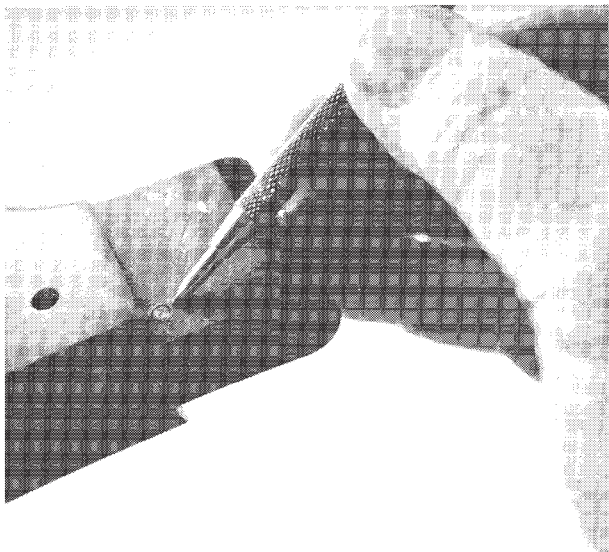


- 19.** Remove the extractor plunger and spring from the bolt head.

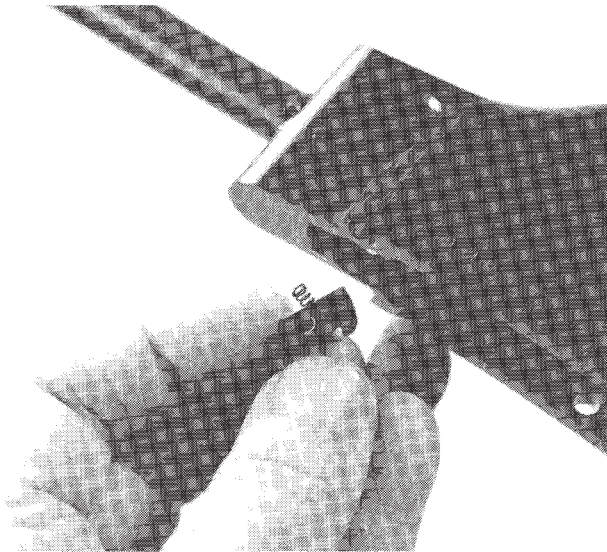


- 20.** The ejector is retained in the bolt head by a cross pin. **Caution:** As the drift is taken out, control the ejector—the spring is very powerful.

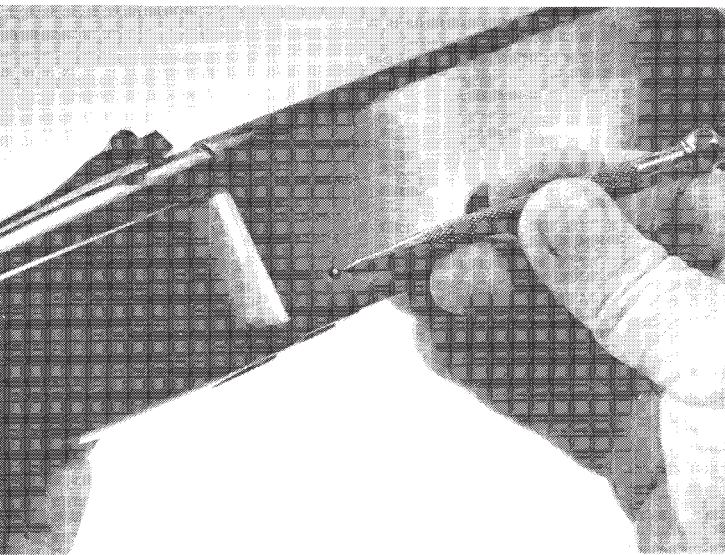
21. Push out the sear pivot pin.



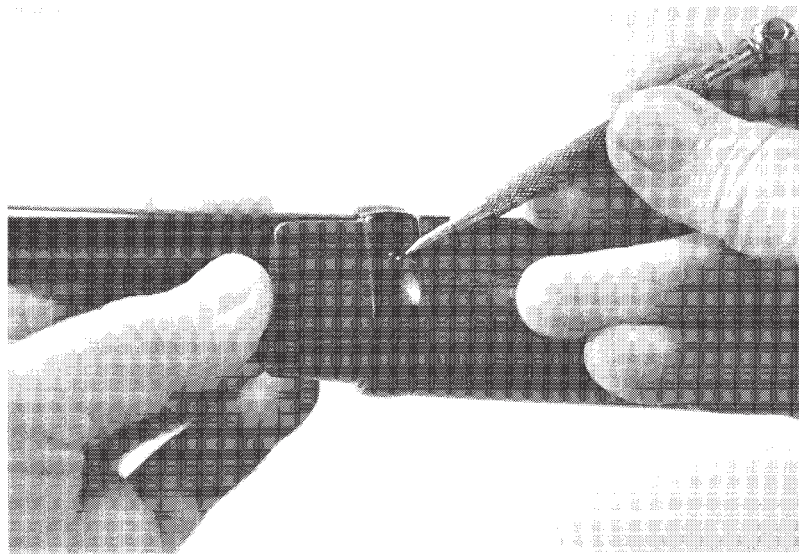
22. Remove the sear and its spring downward.



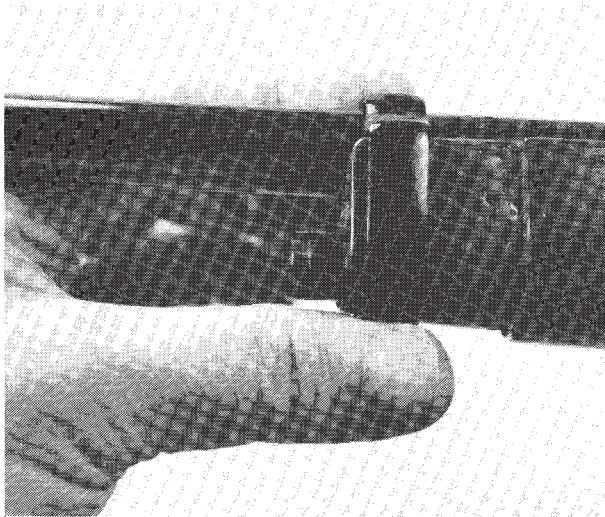
23. Drifting out this cross pin toward the right will release the magazine catch and its spring for removal downward.



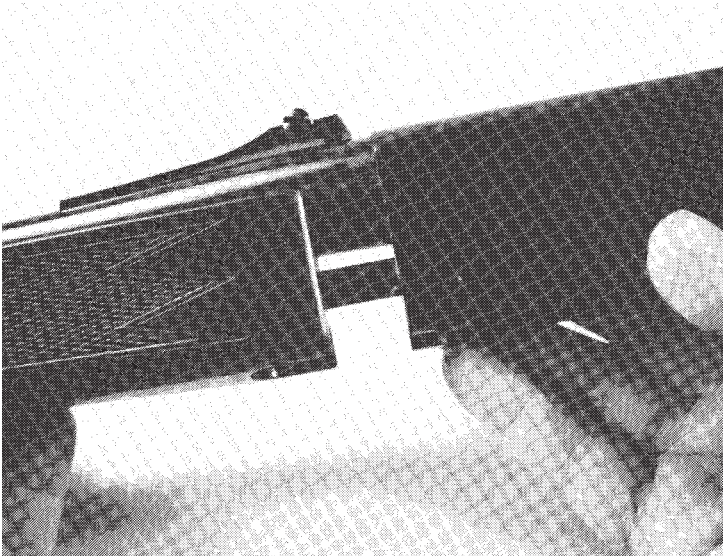
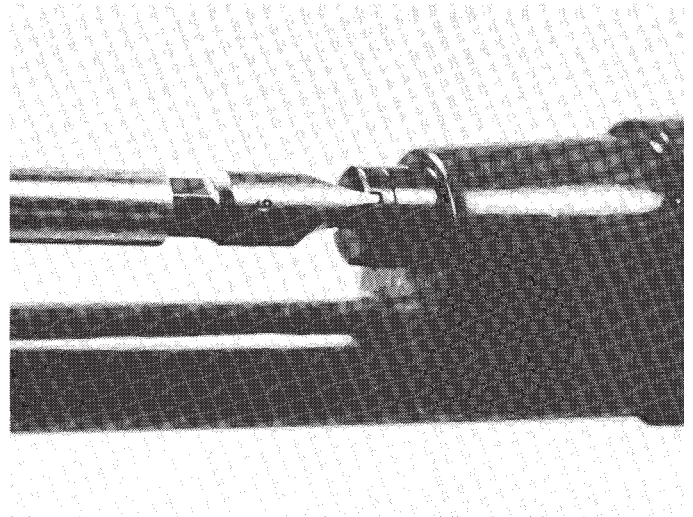
24. Drift out the barrel band cross pin toward the right.



25. Remove the barrel band toward the front.



26. Remove the large screw at the front of the forend.

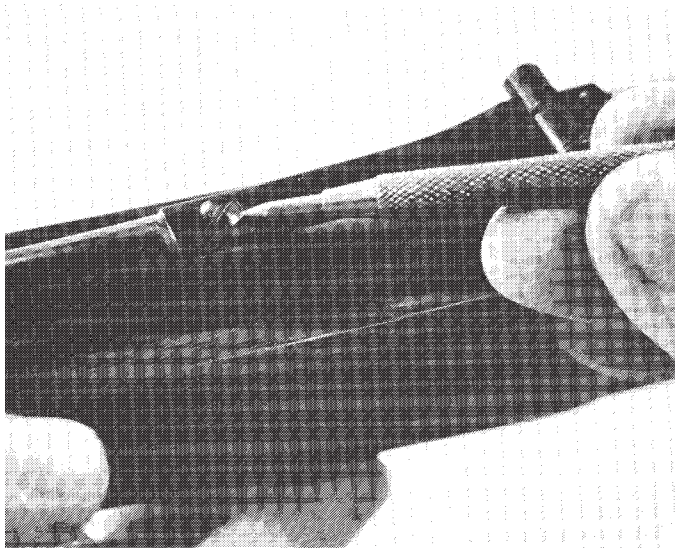
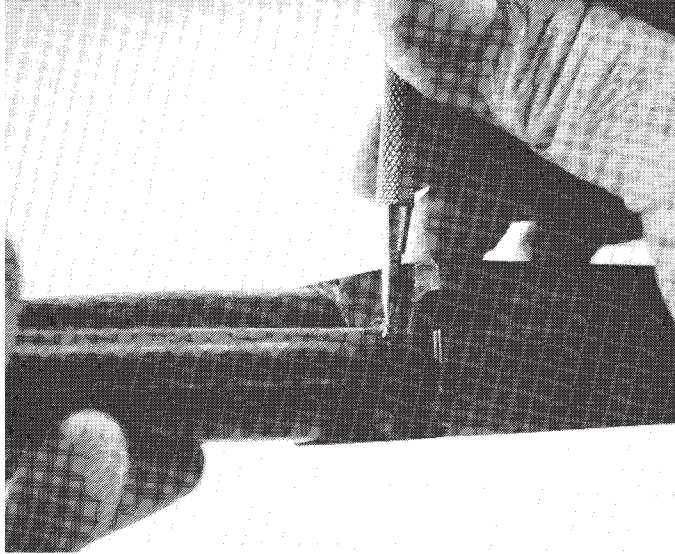


27. Remove the forend toward the front.



28. The outer spacer ring will usually stay on the forend mounting bolt. If the inner spacer ring needs to be removed, it is easily lifted out of its recess in the forend.

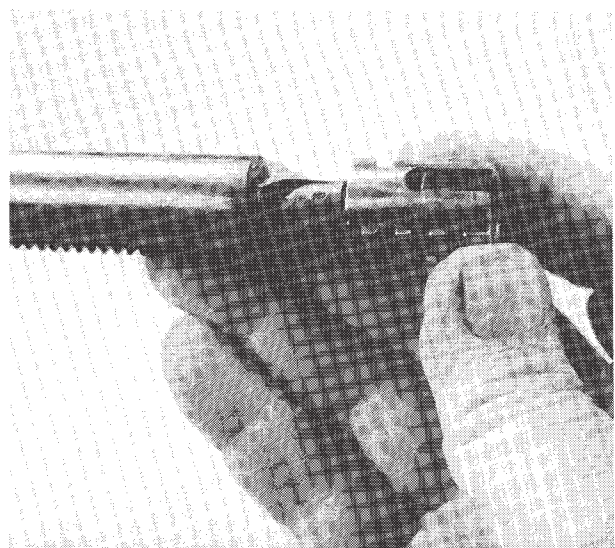
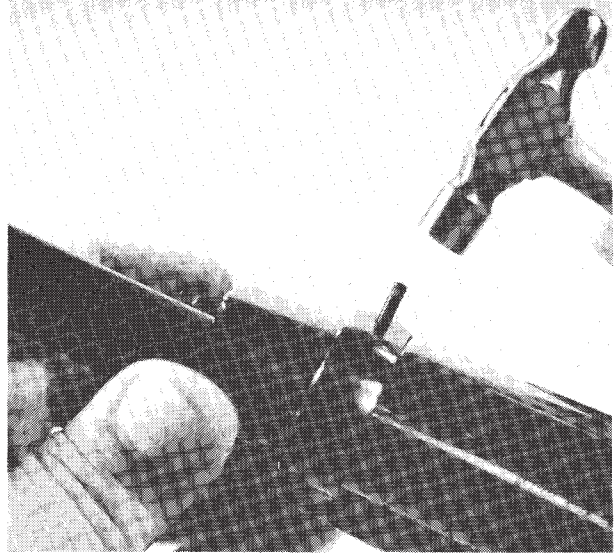
- 29.** The forend mounting rod is retained on a post at the front of the receiver by a roll cross pin.



- 30.** The rear sight is retained on top of the barrel by a vertical screw. The front sight may be drifted out of its dovetail toward the right. The front sight ramp is not routinely removable.

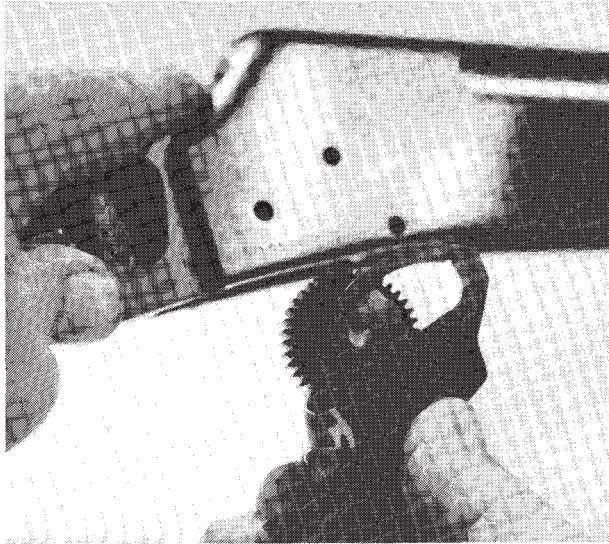
Reassembly Tips:

- 1.** When replacing the barrel band, be sure the hole with spline marks is on the right side, and replace the pin accordingly. Be sure all of the cross pins are driven in from right to left, with the splined head on the right side.

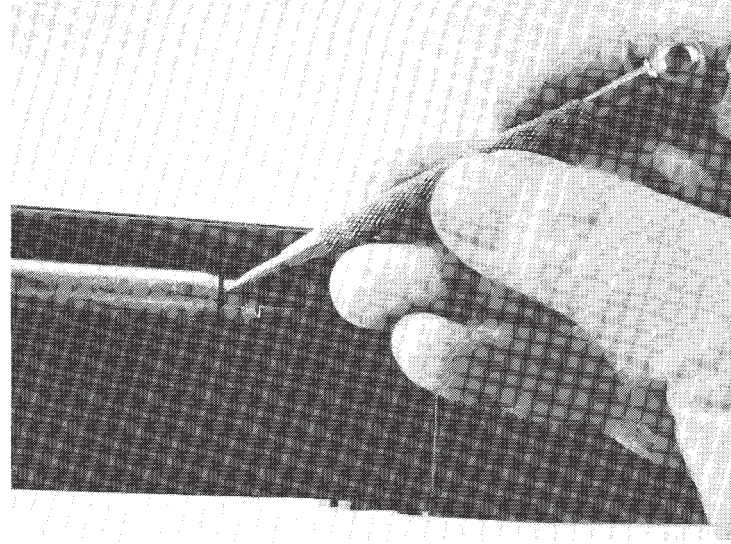


- 2.** When reinstalling the bolt head, be sure the extractor is oriented toward the right side, as shown.

3. Insert the lever assembly with the bolt in fully closed position, and with the bolt gear at the rearmost location in its track, as shown.

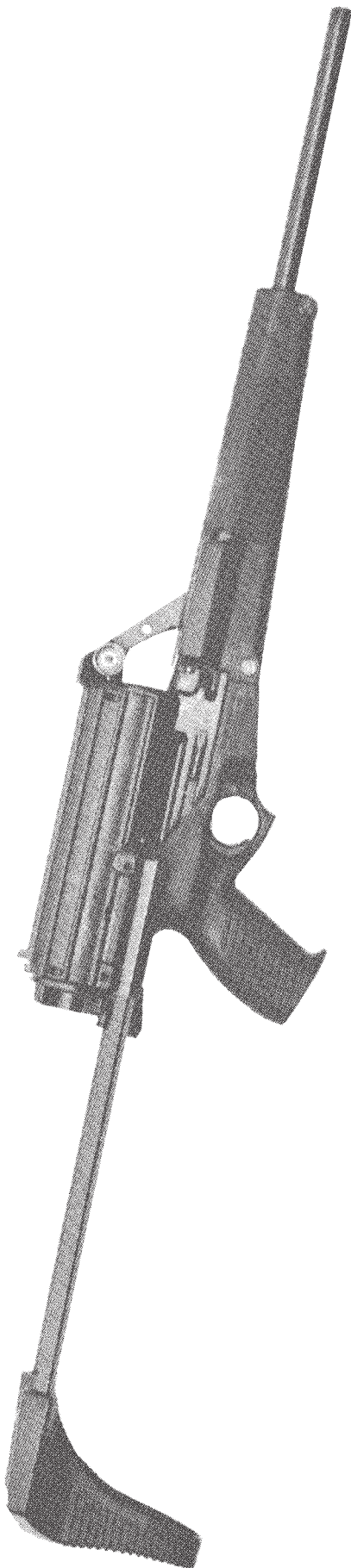


4. Insert the gear and lever cross pins, but do not drive them into place until the gear and bolt engagement is correct. There should be a very small space visible at the point indicated with the lever closed. If the space is measurable, as it is here, then the engagement must be readjusted. To do this, pull the lever pin only, and reposition the lever track on the gear until the bolt closure is correct. If it is too tight for full lever travel, back it off by one gear tooth.



5. As the hammer is reinstalled, the trigger must be pulled fully to the rear for sear clearance, and the strut must be manipulated into proper contact with the hammer and the hammer spring follower. **Important:** As the hammer pivot pin is reinserted, a tool must be used from the opposite side to depress the lever lock, which uses the hammer pin as a locking surface.

Calico Model M-900



Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Calico Model M-900 also apply to the following guns:

Calico Model M-951-S

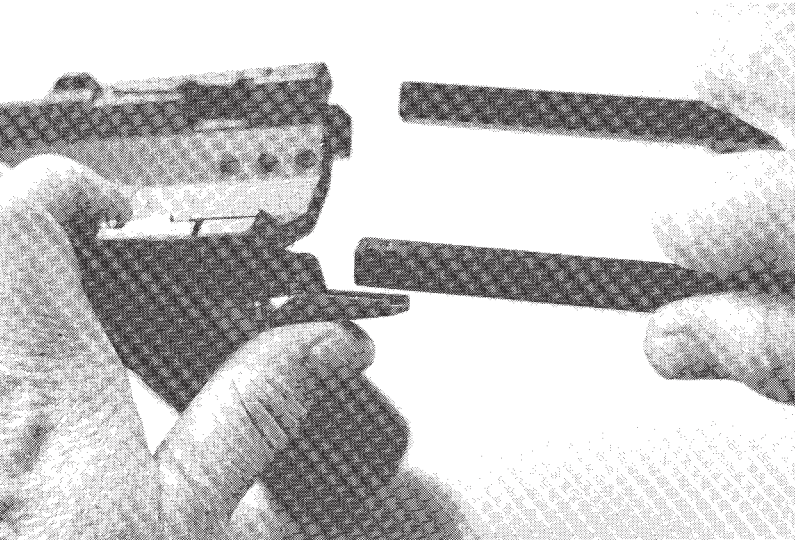
Calico Model M-951 Tactical Carbine

Data:	Calico Model M-900
Origin:	United States
Manufacturer:	Calico, Inc. Bakersfield, CA
Cartridge:	9mm Parabellum
Magazine capacity:	50 or 100 rounds
Overall length:	28-1/2 inches (34-1/2 inches with stock extended)
Barrel length:	16 inches
Weight:	3.7 pounds

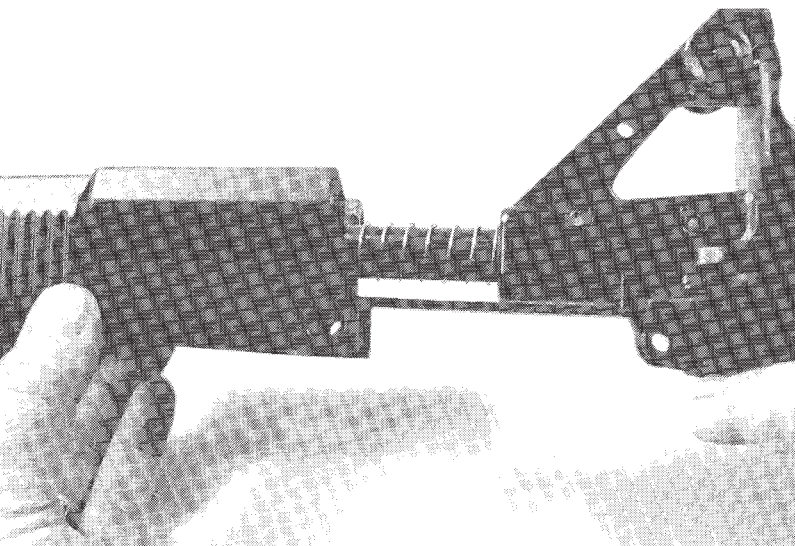
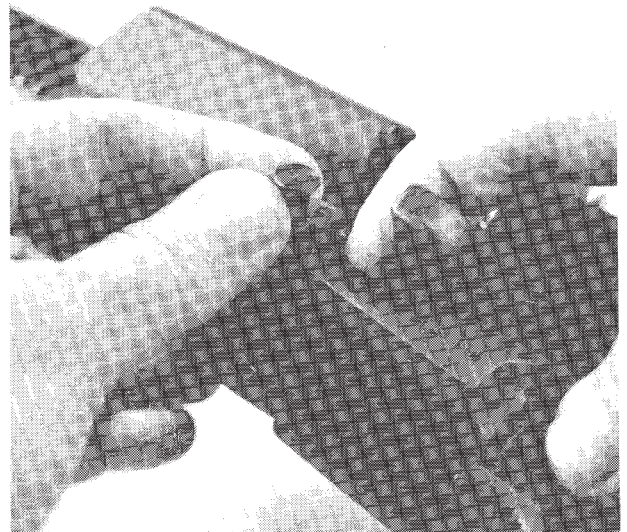
In 1986, the California Instrument Company introduced a 22 rim-fire semi-auto rifle, the Model 100, that had a unique helical-feed magazine with a capacity of 100 rounds. By 1989, the centerfire version was ready, in 9mm Parabellum, with 50-round and 100-round magazines. The M-951-S and M-951 Tactical Carbine are mechanically identical. There is also a handgun version, the Model M-950. The bolt is roller-locked, in a manner similar to the Heckler & Koch guns.

Disassembly:

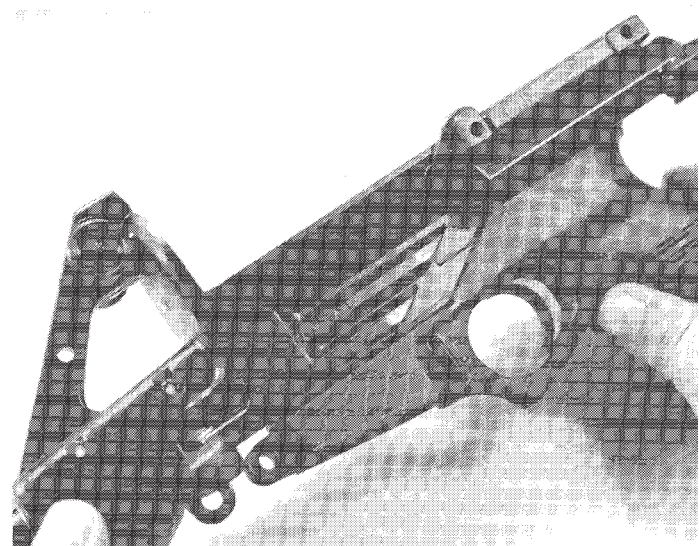
1. Remove the magazine. Pull the stock out to the opened position, operate the stock latch again, and remove the stock toward the rear.



2. Pull the trigger to drop the striker to fired position. Push out the large cross pin just below the cocking handle. If it is installed left-to-right, the handle must be moved back slightly to clear it.

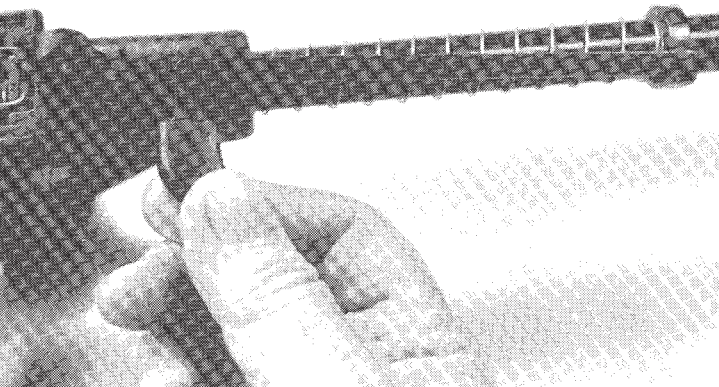


3. Remove the forend toward the front.

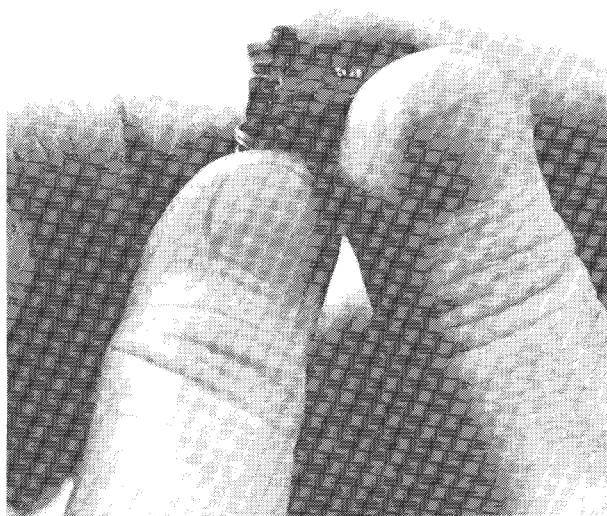
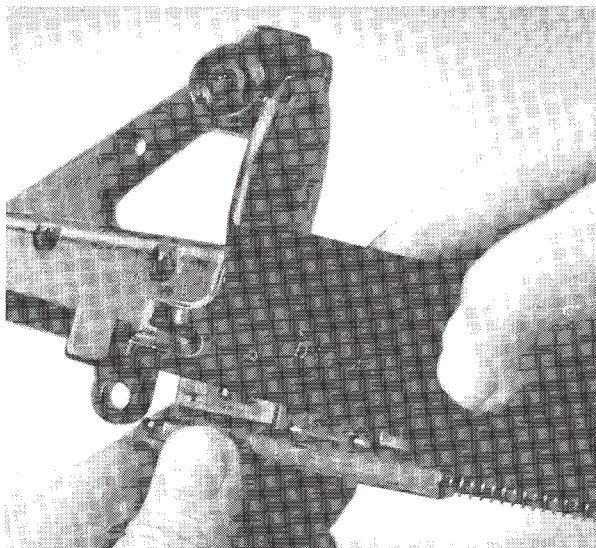


4. Move the pistol grip unit straight toward the rear for removal.

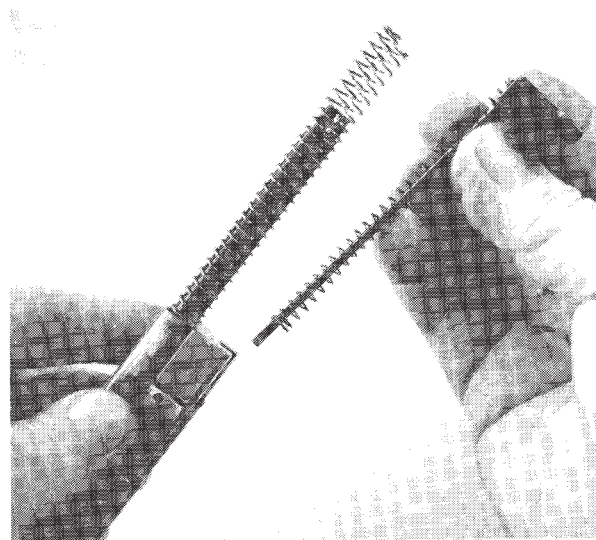
5. Lift the cocking handle out of its recess at the rear, and remove the handle and its spring toward the front.



6. Push the bolt assembly slightly to the rear from inside the feed opening at the top, and remove it downward.

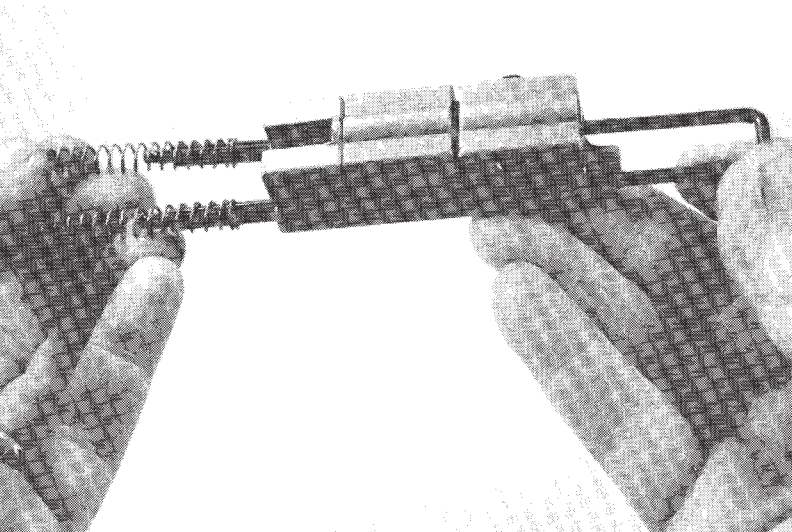


7. Alternately retract the bolt springs, keeping them under control, and move the ends of the guide rods out of their slots in the recoil buffer assembly. **Caution:** Control the springs, and ease the tension slowly.

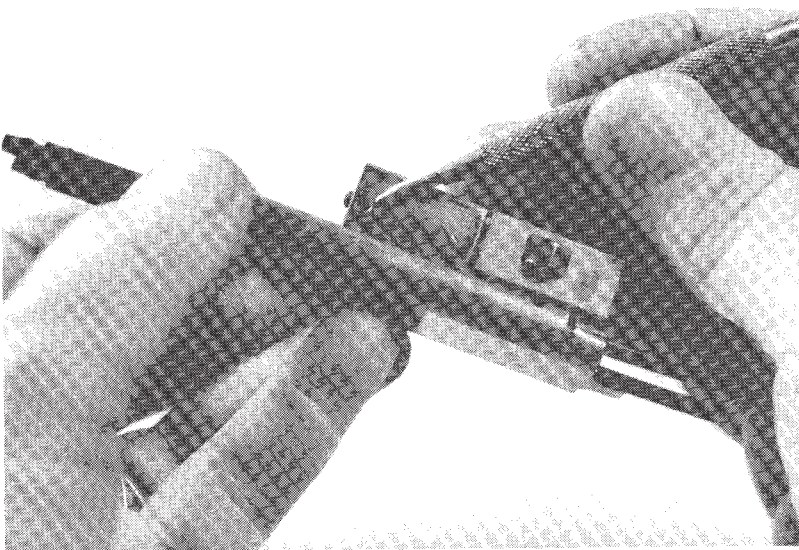
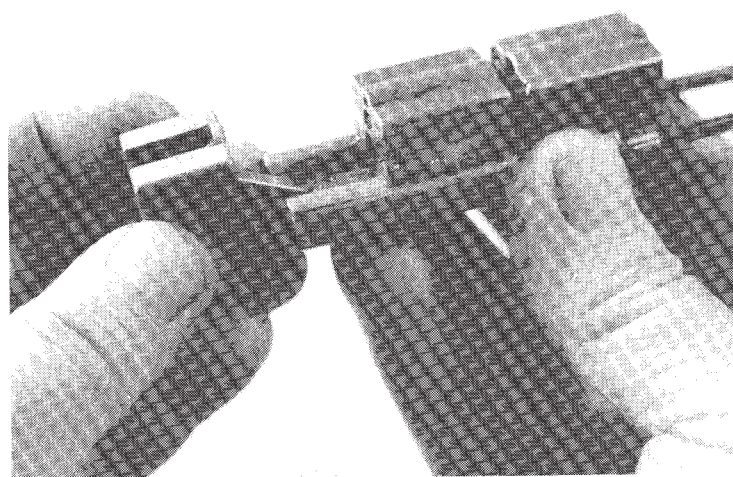


8. Remove the buffer assembly, and the striker spring and its guide, from the bolt. It must be turned to clear.

- 9.** Remove the bolt springs toward the rear.



- 10.** Remove the striker toward the rear.

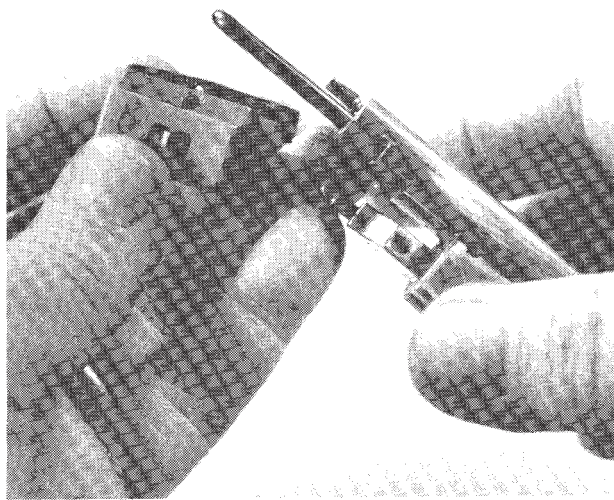


- 11.** The firing pin is retained by a roll-type cross pin. After removal of the pin, the firing pin is taken out rearward.

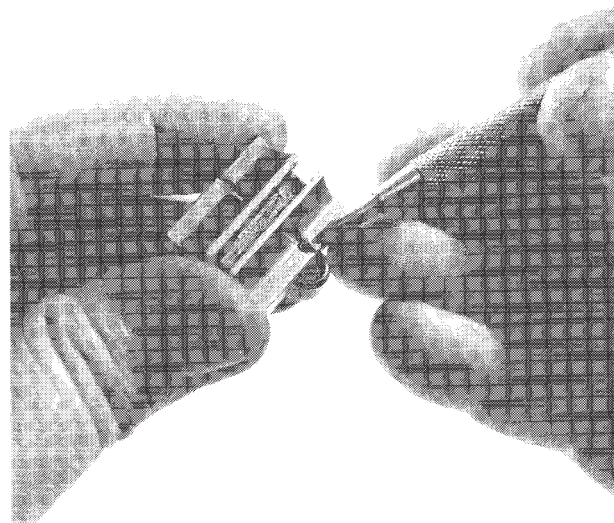
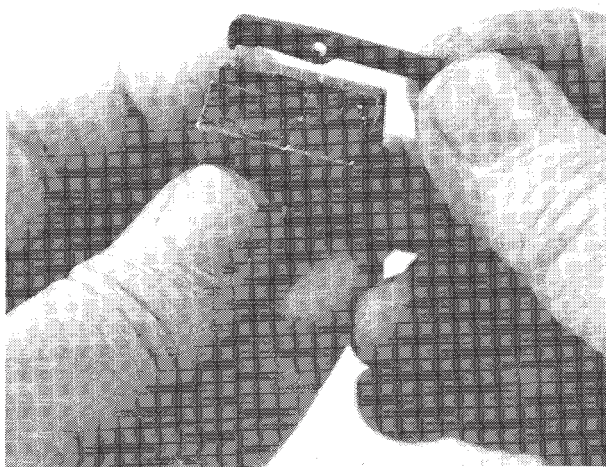


- 12.** With the locking rollers aligned with an access cut in the lower frame of the bolt, push out the extractor cross pin.

- 13.** Remove the bolt head toward the front.

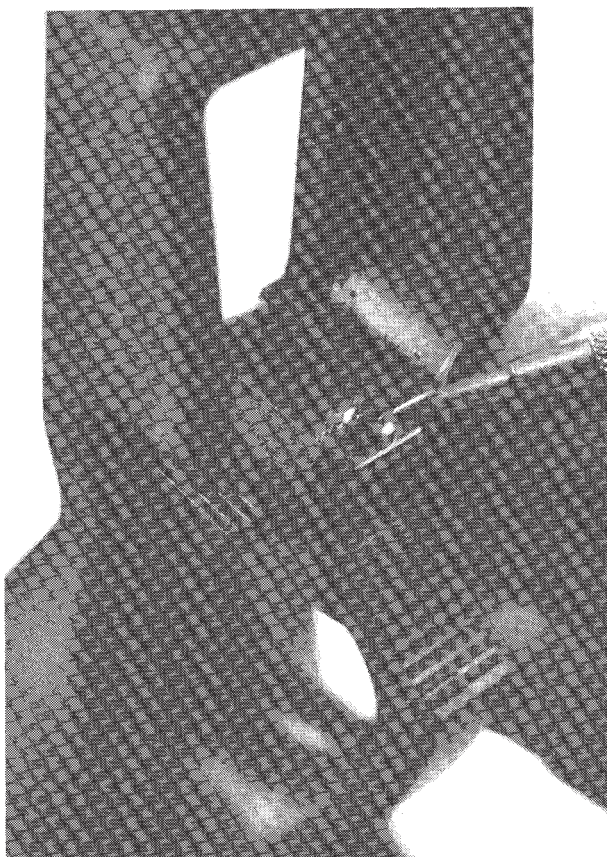


- 14.** The extractor and its coil spring are now freed for removal from the underside of the bolt head.

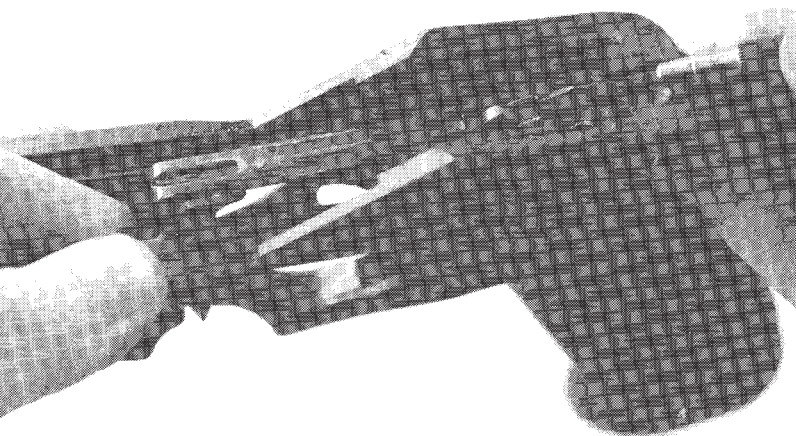


- 15.** The locking rollers are retained by vertical roll pins in blind holes, and routine removal is not possible. If replacement is necessary, the unit must be returned to the factory.

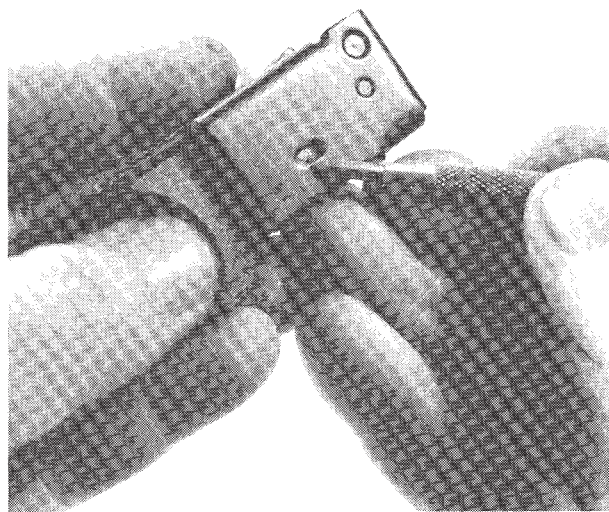
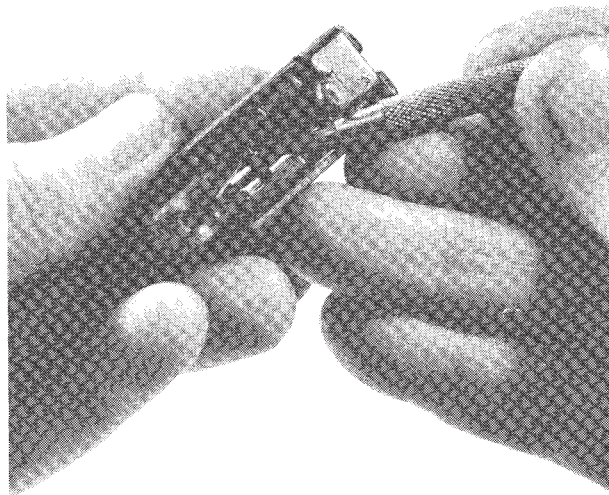
- 16.** Removal of the trigger group from the pistol grip requires the removal of two Phillips screws. One is located inside the hollow grip, and the other is located at the front, inside the ejection port.



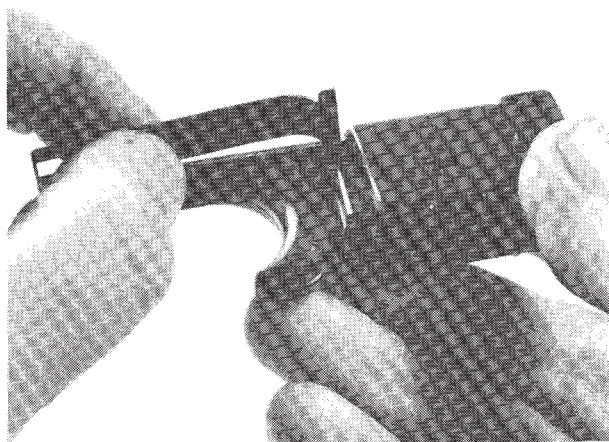
- 17.** After the two screws are removed, lift the trigger group gently at both ends, and take it out upward. The safety must be in the on-safe position during this operation.



- 18.** Note the position of the disconnecter spring in the underside of the trigger unit, as it must be restrained as the trigger pin is removed.

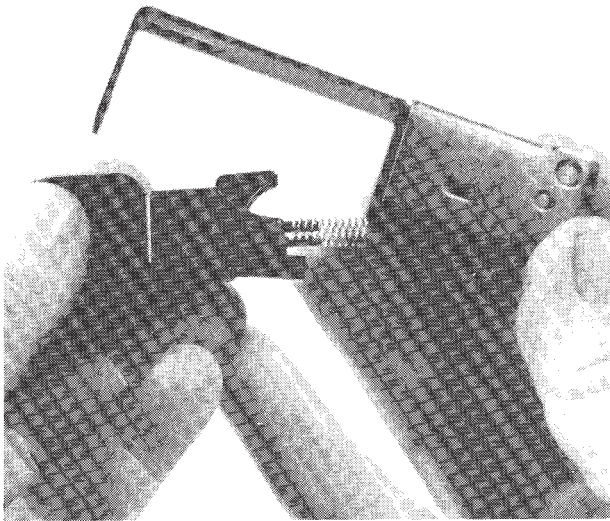


- 19.** Restrain the spring, and push out the trigger cross pin. The spring will be released for removal.

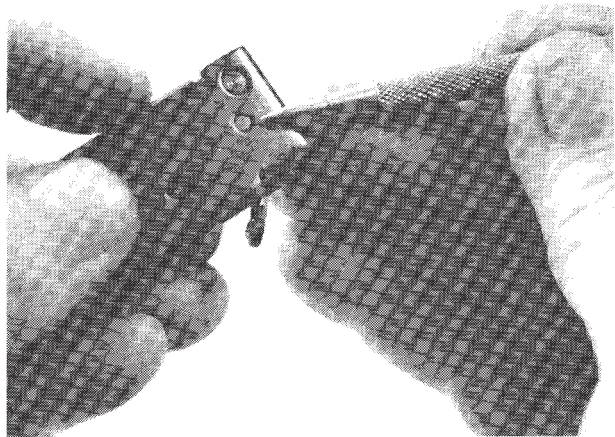


- 20.** The trigger can now be moved forward, and the safety slide plate can be taken off.

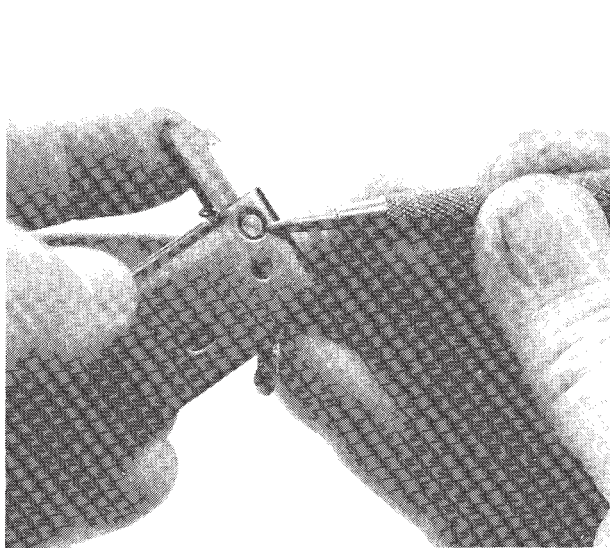
- 21.** Move the trigger and its attached return springs forward, along with the disconnecter, and take them out of the unit.



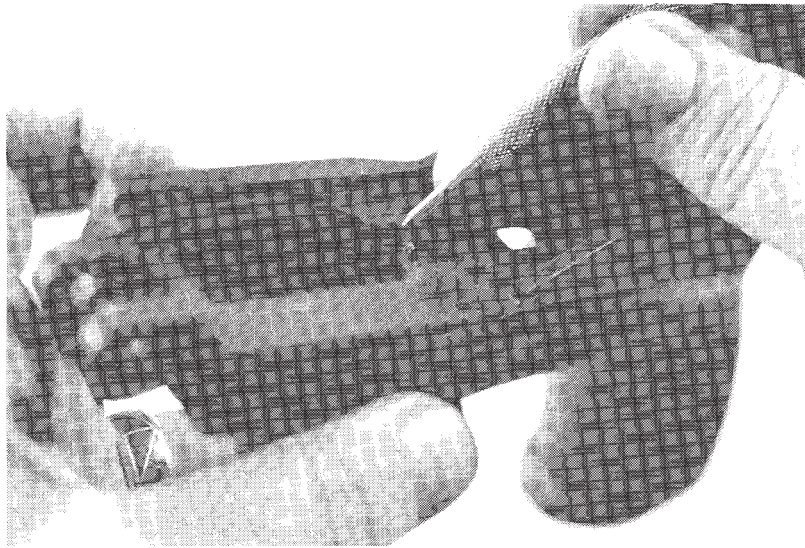
- 22.** Restrain the sear at the top, and push out the sear stop pin.



- 23.** Ease the sear over rearward, releasing the tension of its spring, and push out the sear cross pin. Remove the sear and its spring upward.



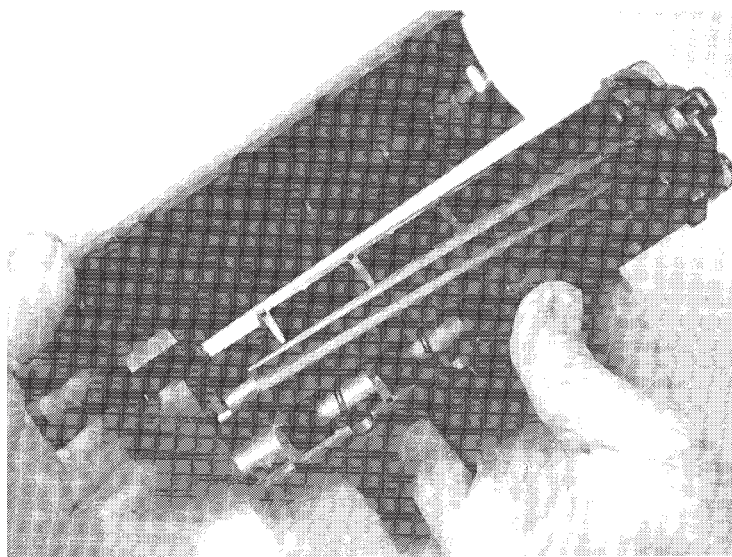
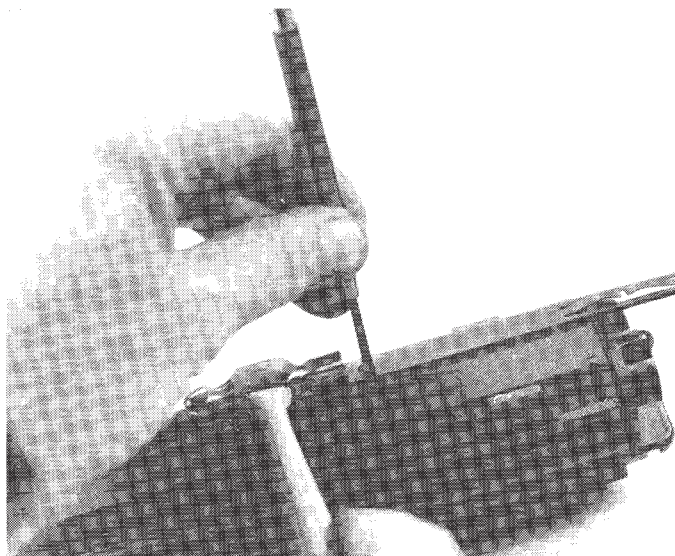
- 24.** The safety-levers, the cross piece and the positioning spring can be removed by taking off the C-clips on each side inside the housing. The levers are then taken off toward each side, the cross shaft is taken out, and the safety cam and spring are removed upward.



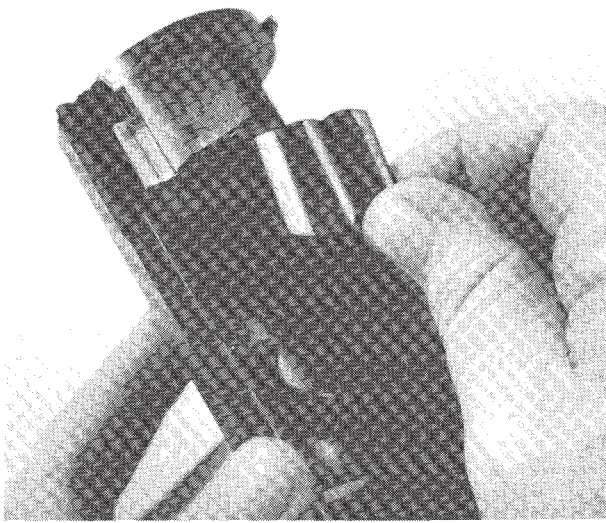
- 25.** If the magazine has to be disassembled, be sure to first push the clutch button to release the spring tension. Slide the top ribbon clamp off toward the front, as shown.



- 26.** Slide the bottom ribbon clamp off toward the rear.

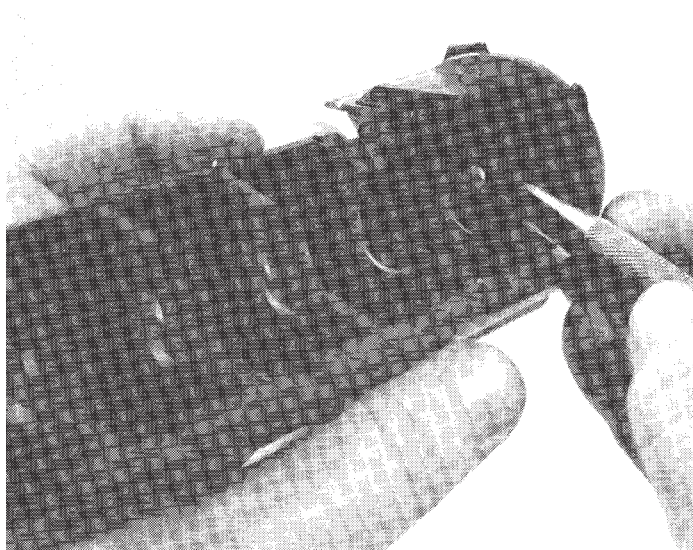


- 27.** Separate the two parts of the magazine housing.

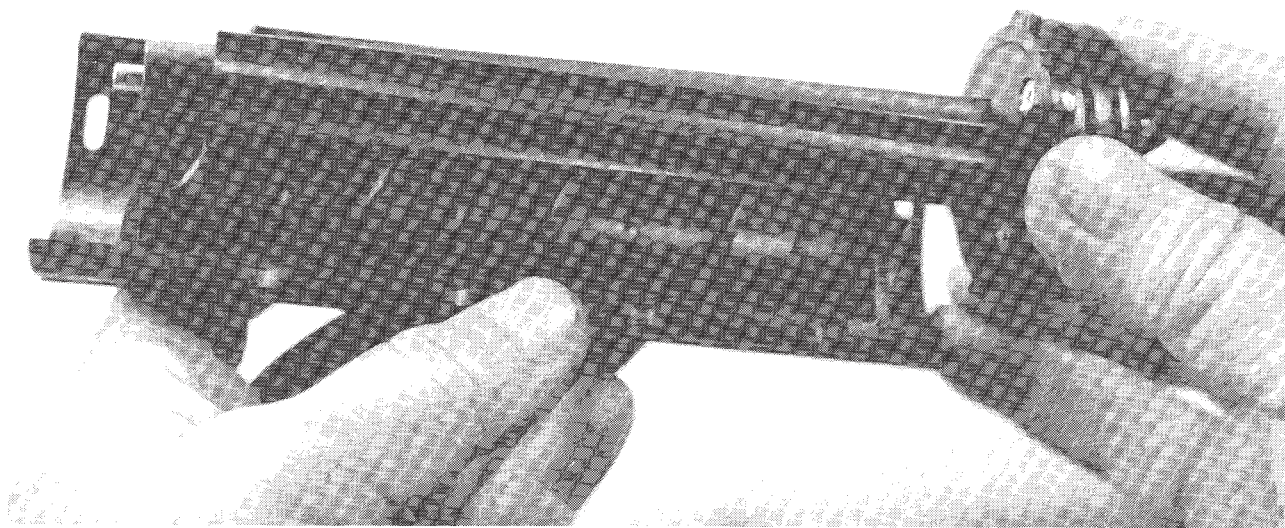
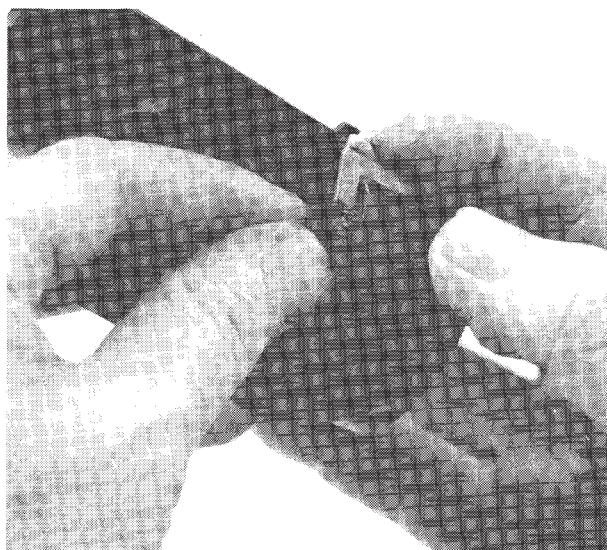


- 28.** Remove the magazine follower from the housing.

- 29.** Take care that the front washer is not lost during disassembly.



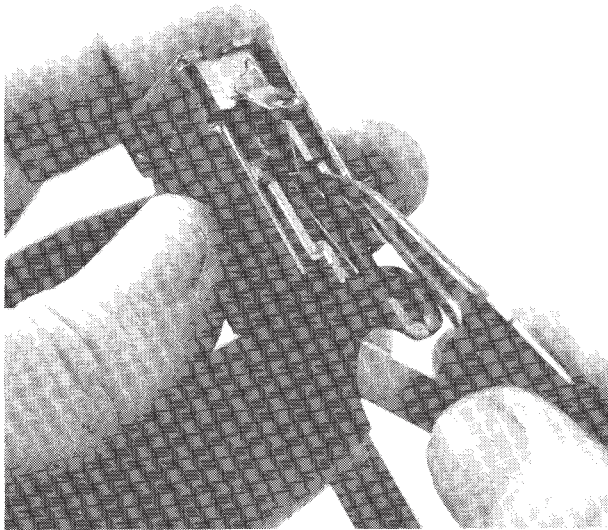
- 30.** If necessary for cleaning, the feed lip, its twin coil springs, and the spring base can be moved out of the housing end piece toward the rear.



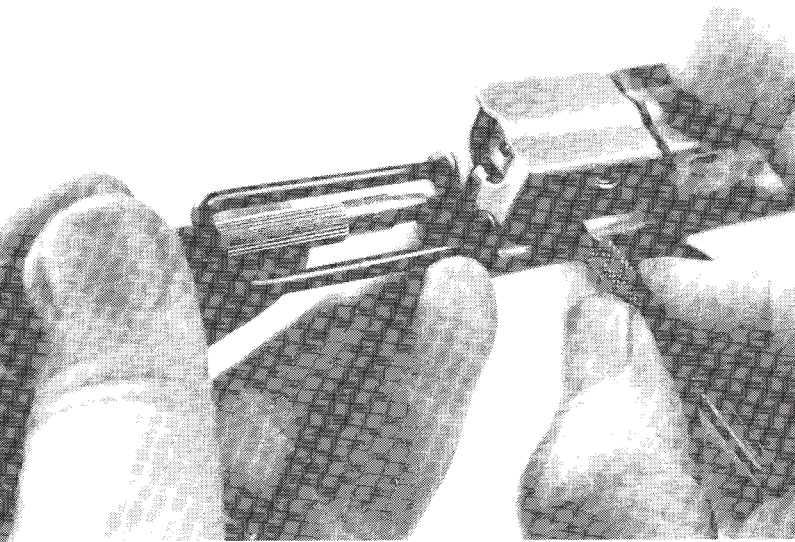
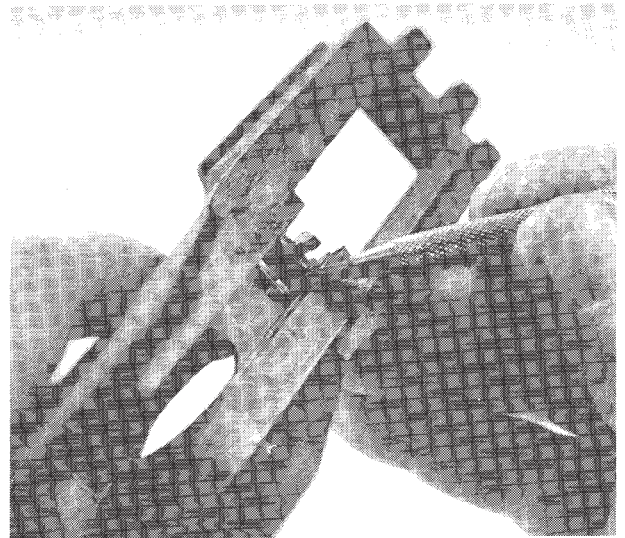
- 31.** The fluted cartridge carrier can be removed for cleaning, but disassembly of the drive spring unit in the rear end piece is not recommended.

Reassembly Tips:

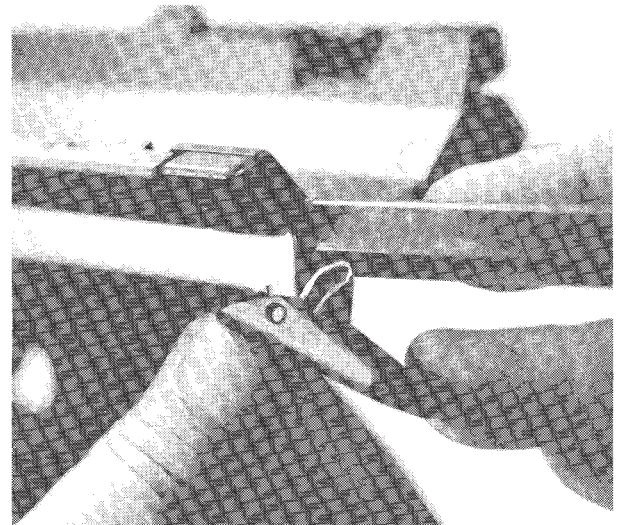
1. When replacing the trigger and disconnect in the trigger unit, insert the cross pin half way, and use pliers to position the disconnect spring for passage of the pin through its loop.



2. If the safety system has been disassembled, be sure the longer cross arm of the positioning spring is at the rear, as shown. The front tab of the safety slide ("sear block") must go between the cross arm of the spring and the cam.



3. To reinstall the extractor, its spring, and the bolt head, insert a tool from the front to lift the extractor, and use a small drift from the side to position the parts for insertion of the cross pin. Be sure the pin is properly centered in the unit.



4. When the stock is replaced, the loop of the latch spring must be flexed outward, so that it bears on the left bar of the stock as it is inserted.

Colt AR-15

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the Colt AR-15 also apply to the following guns:

Armalite AR-15

Armalite AR-10

Colt AR-15

Colt AR-15A2 Sporter II

Collapsible Stock Model

Colt AR-15A2 Carbine

Colt AR-15A2 Delta HBAR

Colt AR-15A2 HBAR

Colt AR-15A2 Delta HBAR Match

**Colt AR-15A2 Government
Model Target**

**Colt AR-15A2 Government
Model Carbine**

Colt Sporter Lightweight Rifle

Colt Sporter Target Model

Colt Sporter Match Delta HBAR

Colt Sporter Match HBAR

Eagle Arms EA-15

Olympic Arms AR-15 Heavy Match

**Olympic Arms AT-15
Service Match**

Olympic Arms CAR-15

Data: Colt AR-15

Origin: United States

Manufacturer: Colt Firearms

Cartridge: .223 Remington (5.56mm)

Magazine Capacity: 5 and 20 rounds

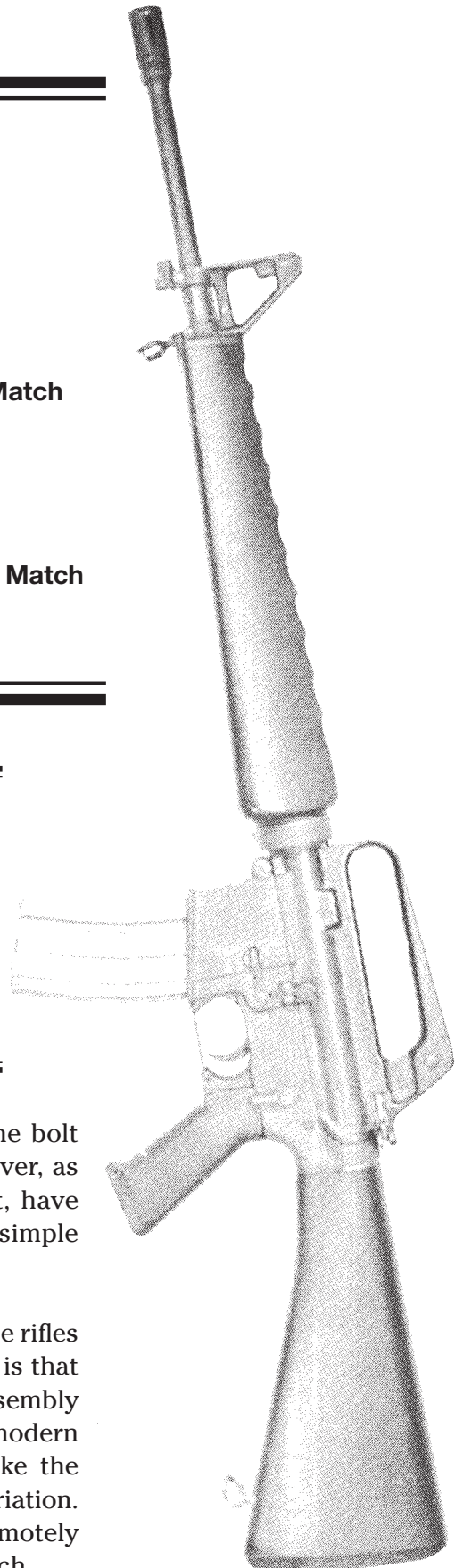
Overall Length: 38-3/8 inches

Barrel Length: 20 inches

Weight: 7-1/4 pounds

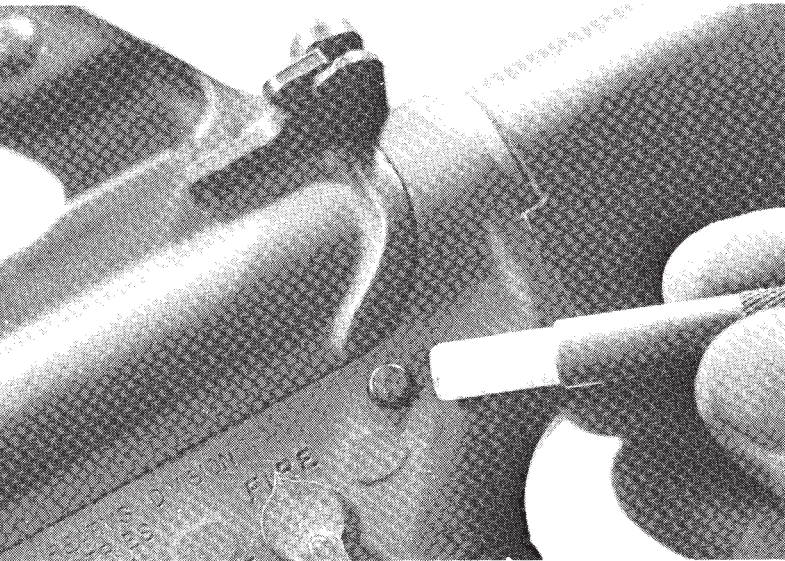
The original AR-15A1, made from 1963 to 1984, did not have the bolt forward-assist plunger and spring on the right side of the receiver, as on the M-16 military gun. All AR-15A2 rifles, up to the present, have this feature. The plunger is retained by a pin, and removal is a simple operation that will require no additional instructions.

It should be noted that there are more manufacturers of AR-15-type rifles than can easily be counted or the models listed. The simple fact is that virtually all of them, despite the source, will follow the same disassembly steps. The most deviation will be in the handguards, as many modern models will have free-floated tubes that will not take down like the standard AR-15, but the rest of the rifle will likely have little variation. The internal parts are almost universally the same. If it looks remotely like an AR-15 and it is not rimfire, then it will likely be a close match.

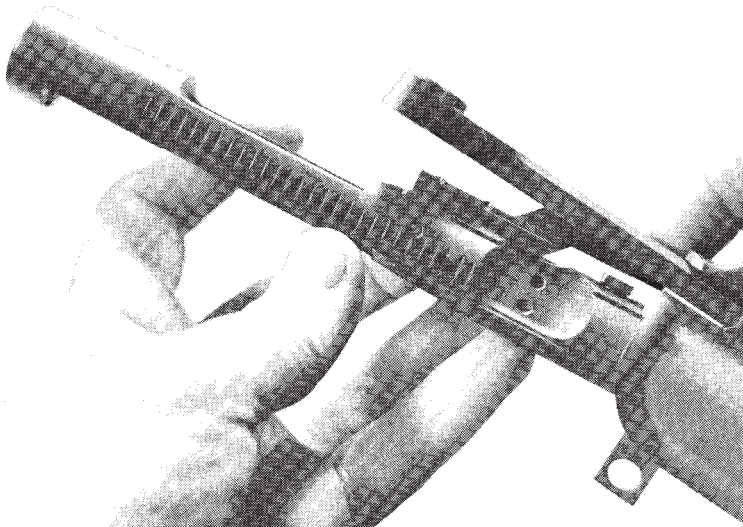
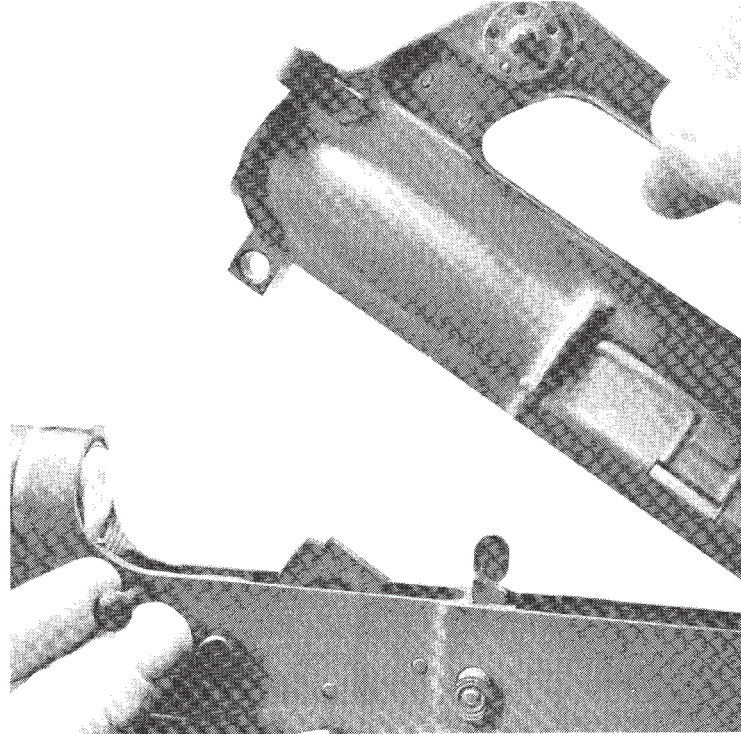


Disassembly:

1. Remove the magazine, and cycle the action to cock the hammer. Push out the takedown pin, located at the upper rear of the grip frame, toward the right.

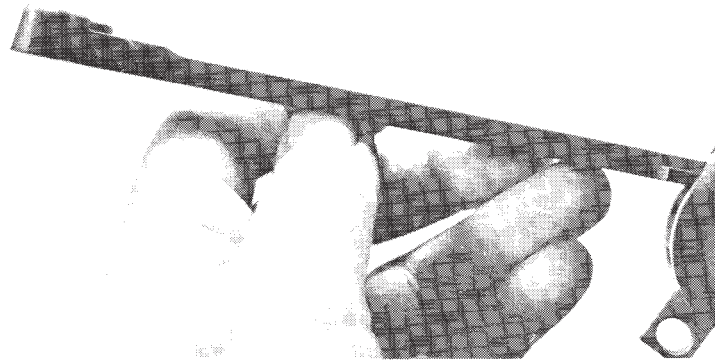


2. With the takedown pin stopped in pulled-out position, tip the barrel and receiver assembly upward at the rear.

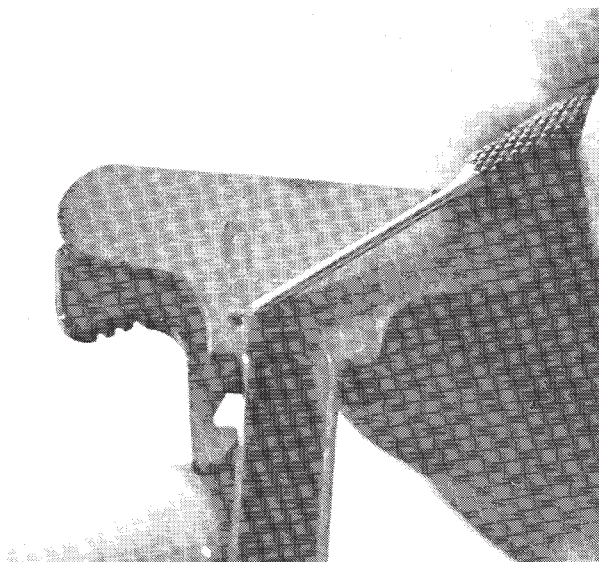


3. Use the charging handle to start the bolt assembly toward the rear, and remove the assembly from the rear of the receiver.

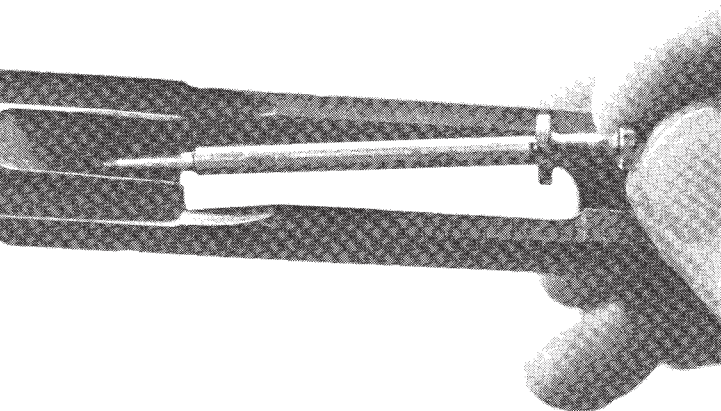
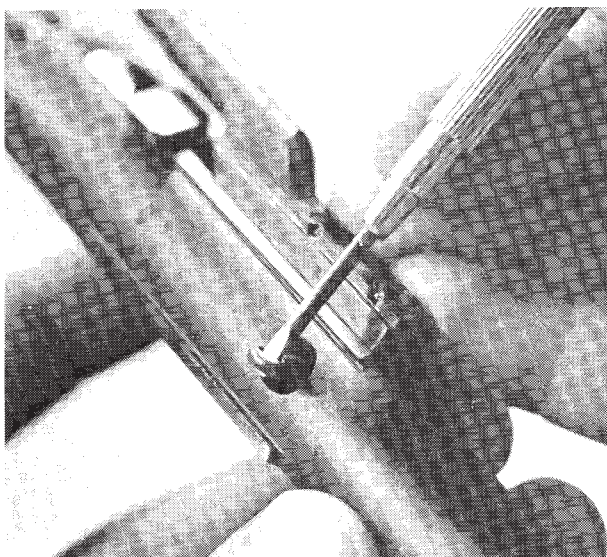
4. Move the charging handle to the rear until it stops, then move it out the rear of the receiver.



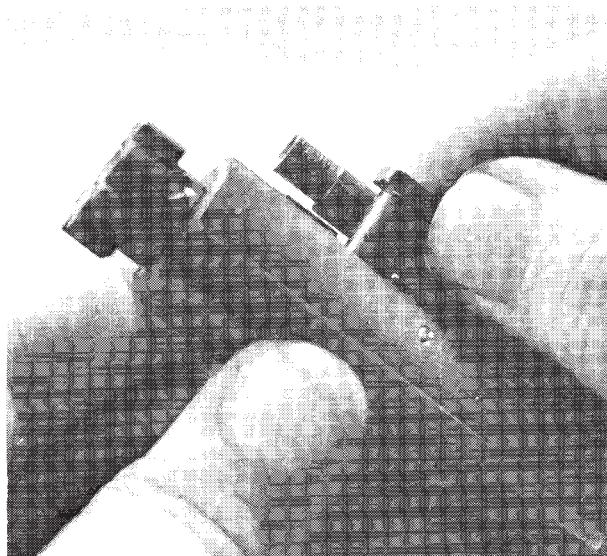
- 5.** The charging handle latch and its spring are retained in the handle by the vertical roll pin. In normal takedown, it is best left in place.



- 6.** Use a small tool to pull out the cotter pin on the left side of the bolt carrier, to free the firing pin.

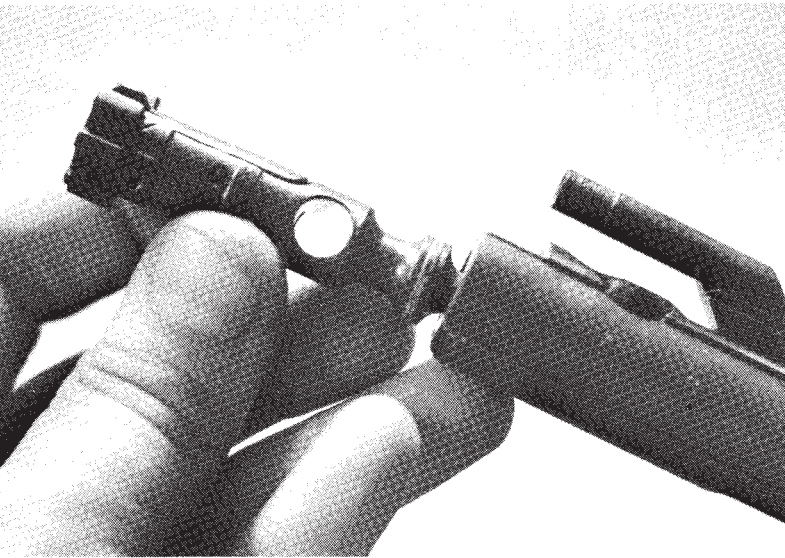


- 7.** Remove the firing pin toward the rear.

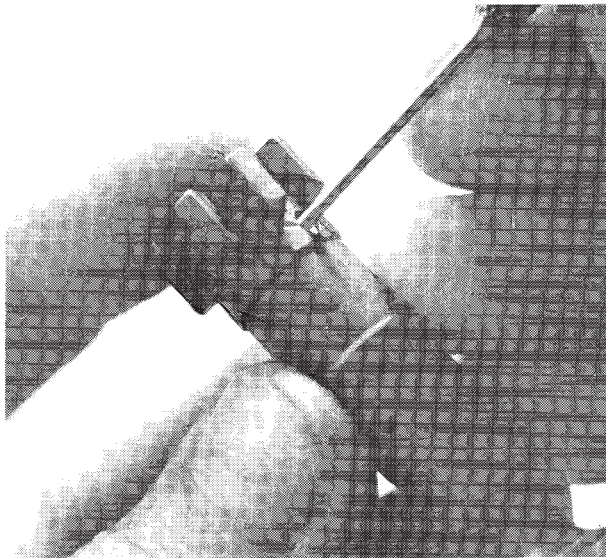
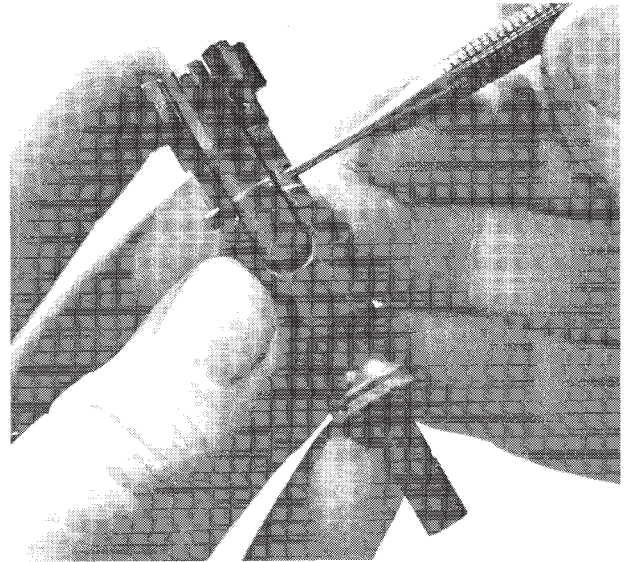


- 8.** Rotate the bolt cam pin to clear its flange from beneath the edge of the overhang, and remove the bolt cam pin upward.

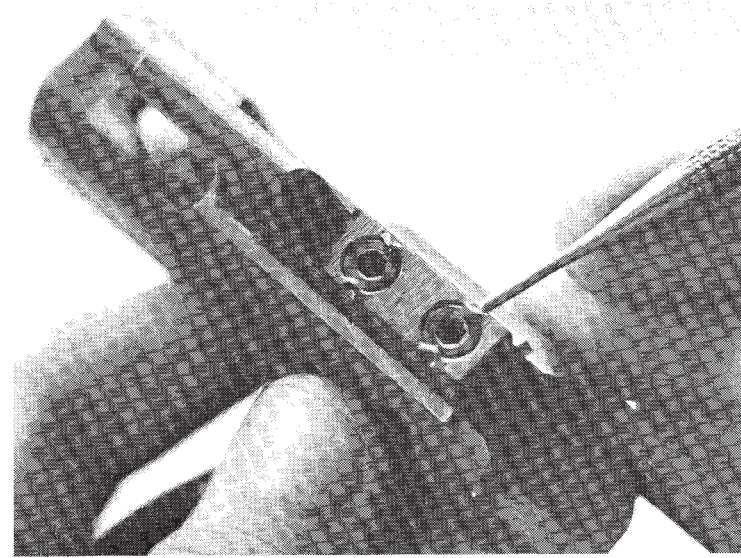
- 9.** Remove the bolt from the front of the bolt carrier.



- 10.** The extractor and its coil spring are retained in the bolt by a cross pin which is easily pushed out in either direction.

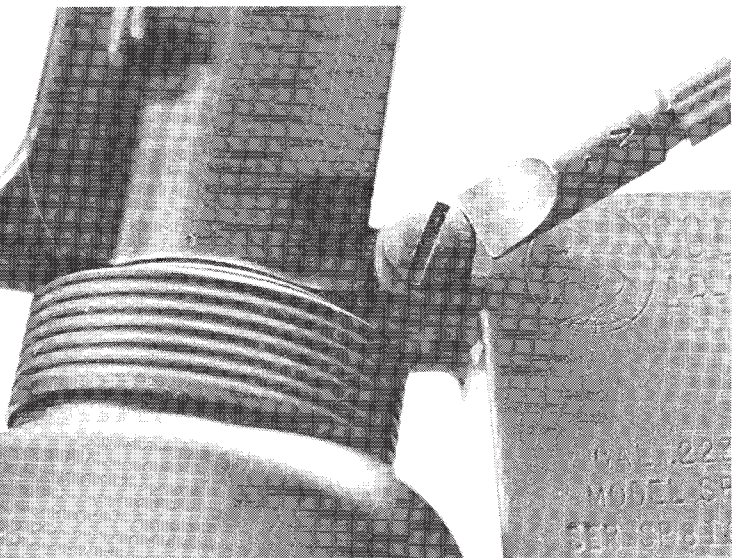


- 11.** The ejector and its spring are also retained by a pin, a small roll pin that crosses the front of the bolt. The ejector spring is quite strong, so restrain the ejector during removal.

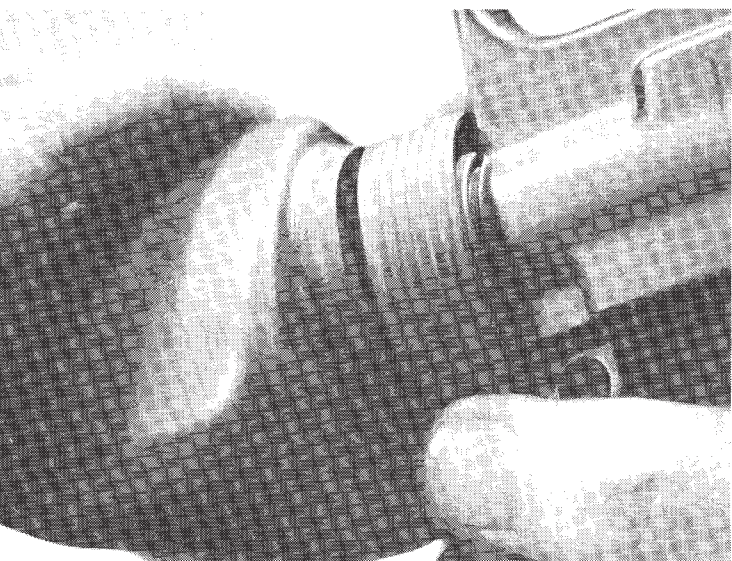
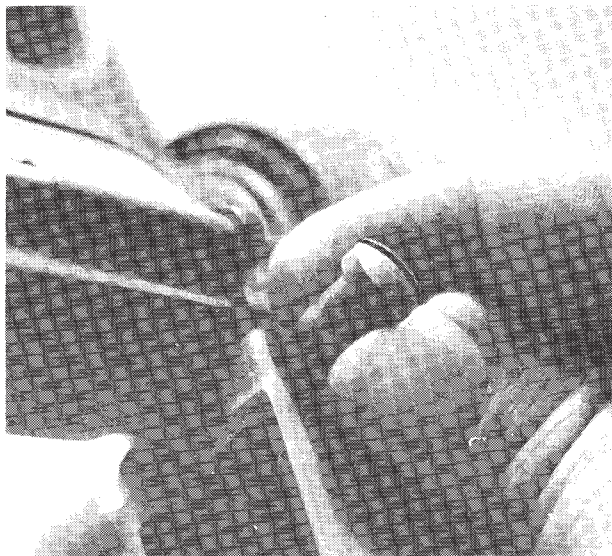


- 12.** The gas cylinder is retained by two Allen screws on top of the bolt carrier, and these are heavily staked in place. **CAUTION:** This unit should be removed only if repair or replacement is necessary.

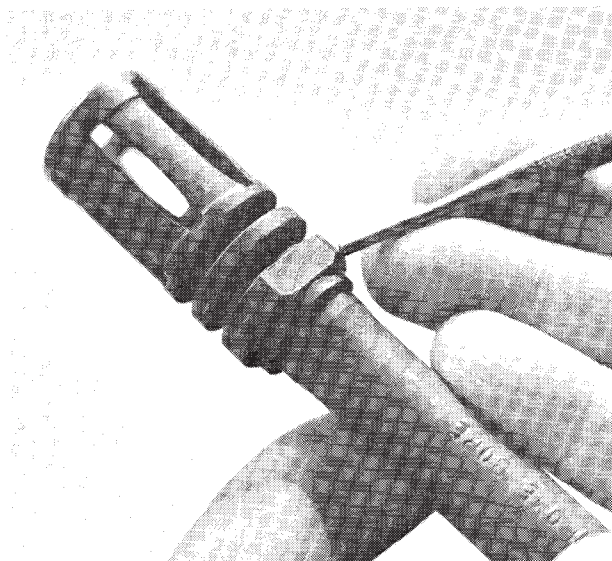
- 13.** Remove the cap screw at the left end of the receiver pivot. It will be necessary to stabilize the screw-slotted head of the pivot with another large screwdriver on the right side during removal.



- 14.** Use a slim drift punch that will not damage the interior threads to nudge the receiver pivot out toward the right, and separate the barrel and receiver unit from the stock and grip frame assembly.

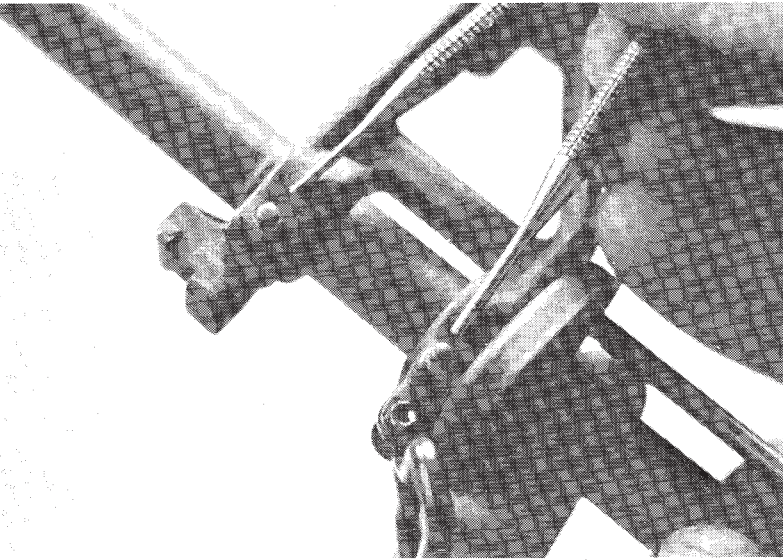


- 15.** Pull back on the grooved slip ring right at the rear of the handguard units, and alternately tip each unit outward at the rear, then remove them rearward.

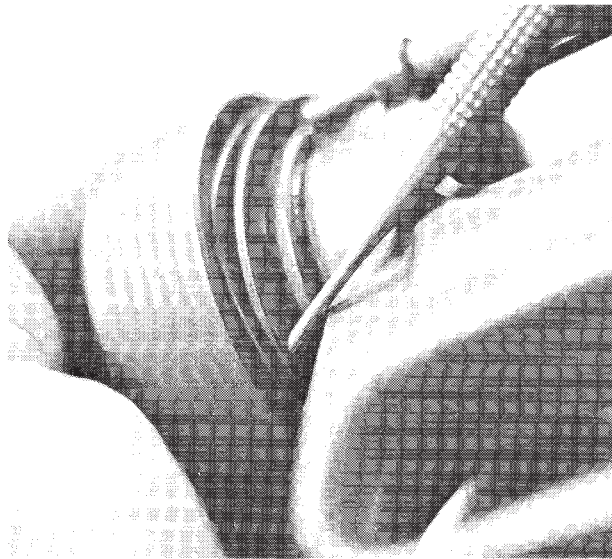
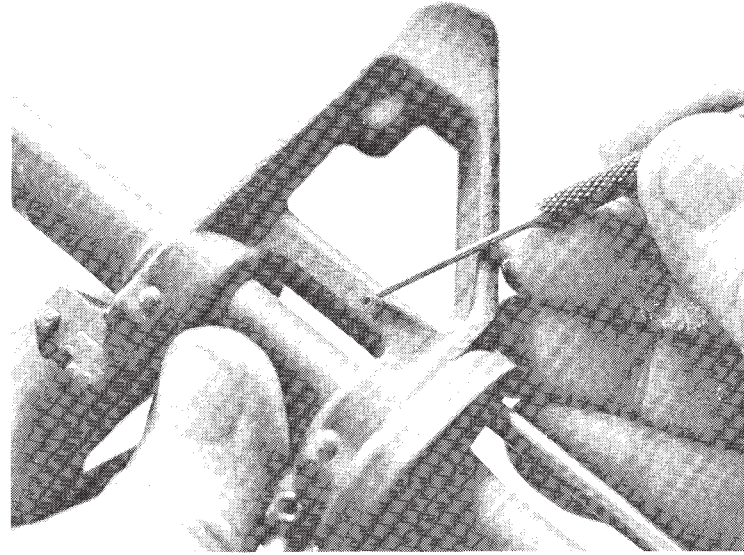


- 16.** With a wrench of the proper size, unscrew the flash hider from the end of the barrel, and take care not to lose the lock washer behind it.

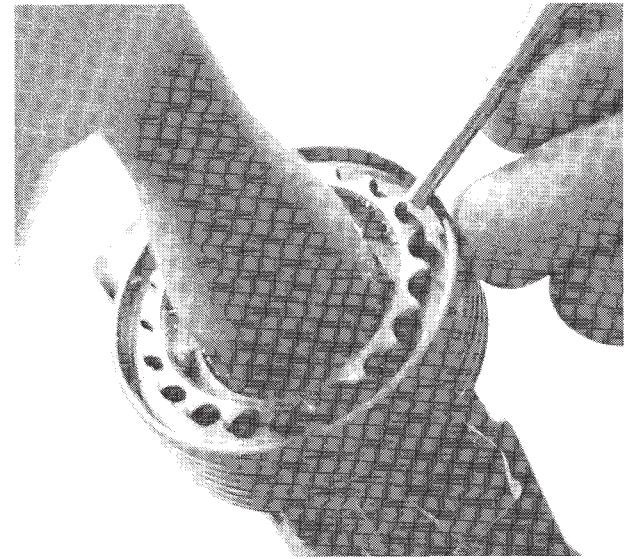
- 17.** The combination front sight base, gas port unit, and bayonet mount is retained on the barrel by two large cross pins. When these are drifted out toward the right, the unit can be nudged forward off the barrel. During removal, take care that the gas transfer tube is not damaged.



- 18.** The gas conduit is retained in the sight unit by a roll cross pin. In normal takedown, this should not be disturbed.

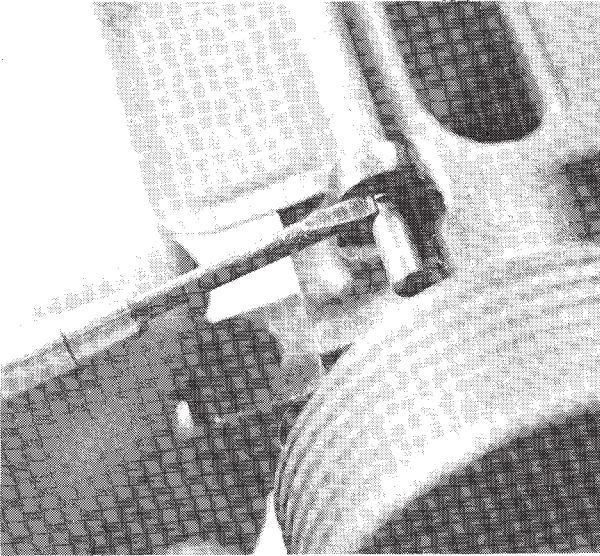


- 19.** Insert a small tool in one of the holes at the top of the large clip-ring at the front of the receiver, and gently pry the ring out of its channel. Moving it rearward will relieve the tension of the circular spring assembly that powers the handguard slip-ring.

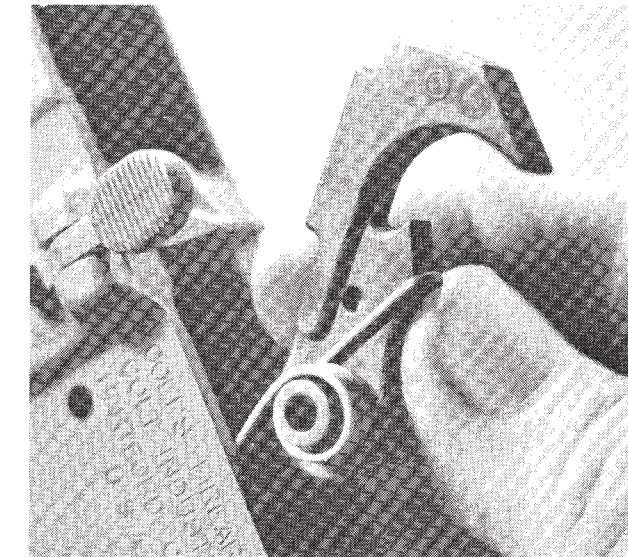
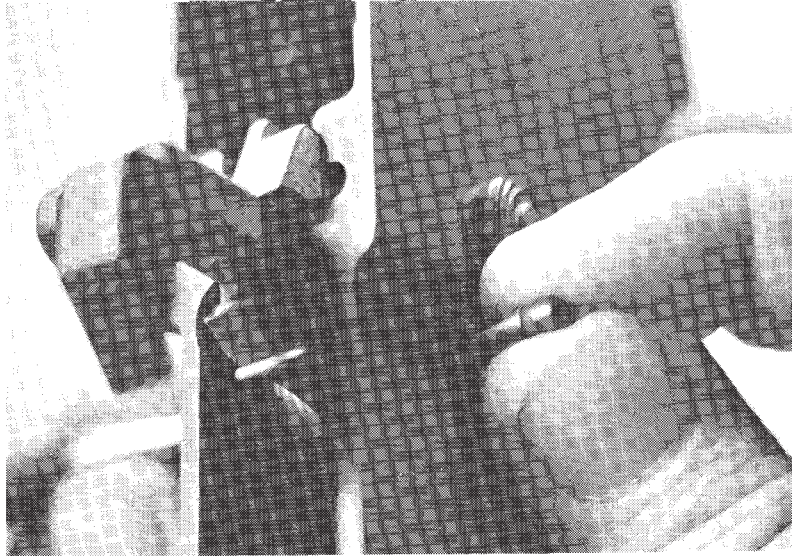


- 20.** Move the slip-ring to the rear to give access to the toothed barrel retaining nut, and unscrew the nut counter-clockwise (front view). Take off the retaining nut, slip-ring, spring, and clip-ring toward the front.

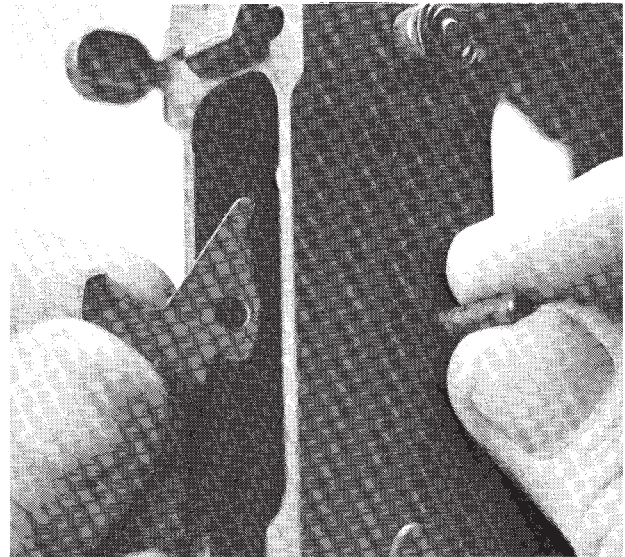
- 21.** The long pin which forms the hinge for the ejection port cover is retained by a C-clip in a groove near its forward end. Take off the C-clip, and move the hinge pin out toward the rear. **Caution:** *The cover spring will be released as the pin is cleared, so restrain it. Take care that the very small C-clip is not lost.*



- 22.** Restrain the hammer and pull the trigger to lower the hammer to fired position. Push out the hammer pivot pin toward either side, controlling the hammer against its spring tension.

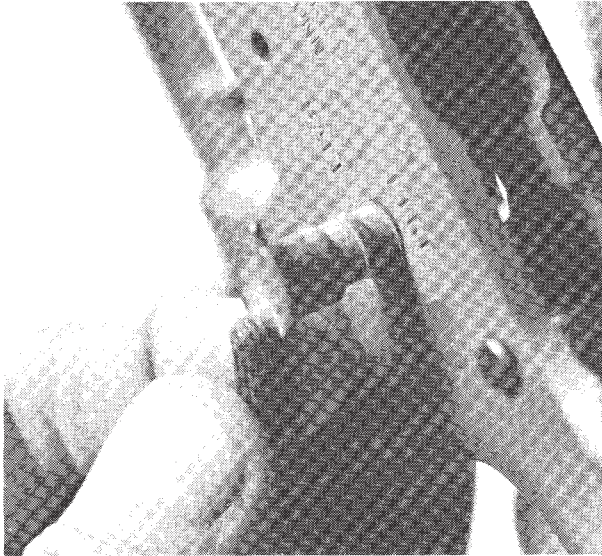


- 23.** Remove the hammer and its spring upward. The spring is easily detached from the hammer.

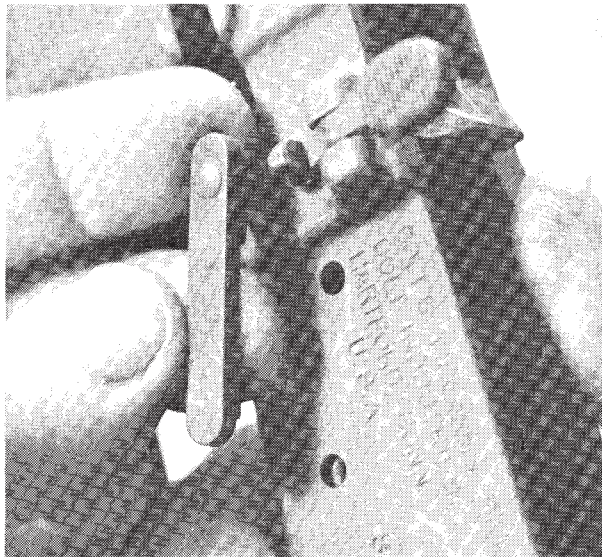
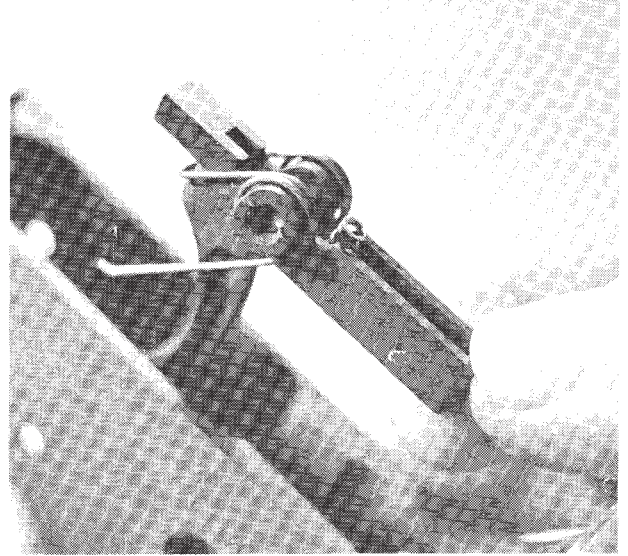


- 24.** Push the trigger pin just far enough toward the right that the disconnector is cleared, and remove the disconnector from the top of the grip frame.

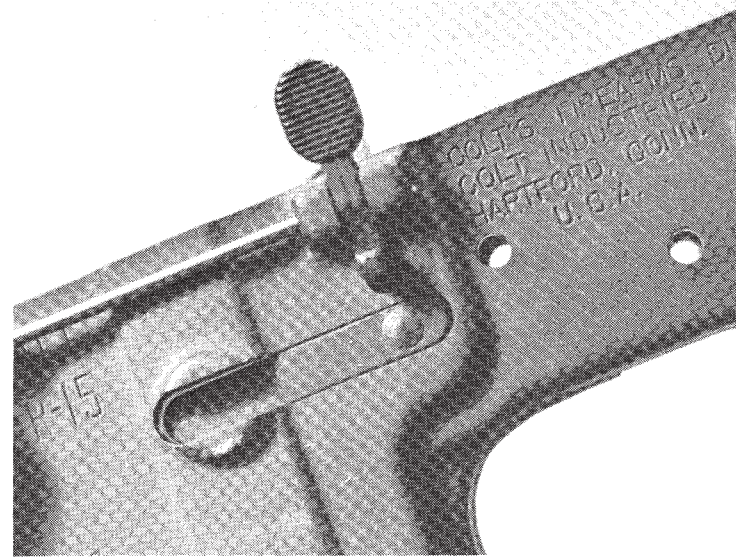
- 25.** Set the safety halfway between its two positions, and use a nylon drift punch on the right side to nudge it toward the left, then remove it



- 26.** Remove the trigger pin, and take out the trigger assembly upward. The trigger spring and disconnecter spring are easily detached from the trigger.

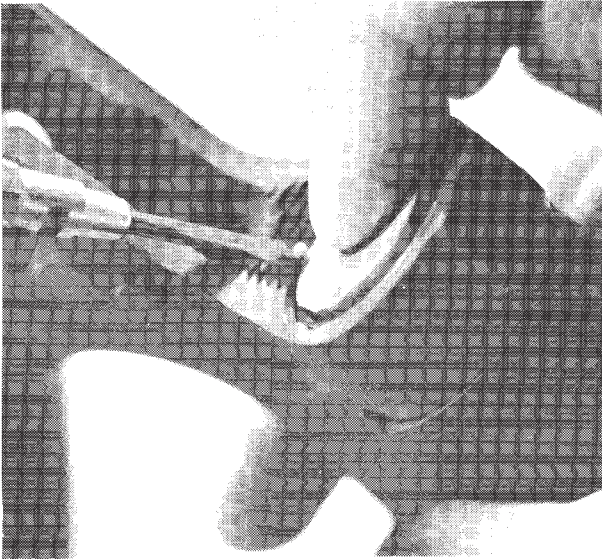


- 27.** The magazine catch is removed by pushing it toward the left beyond its normal magazine release point, then unscrewing the catch piece from the button. The button and spring are then take off toward the right, and the catch piece toward the left. The catch piece is unscrewed counter-clockwise, left-side view.

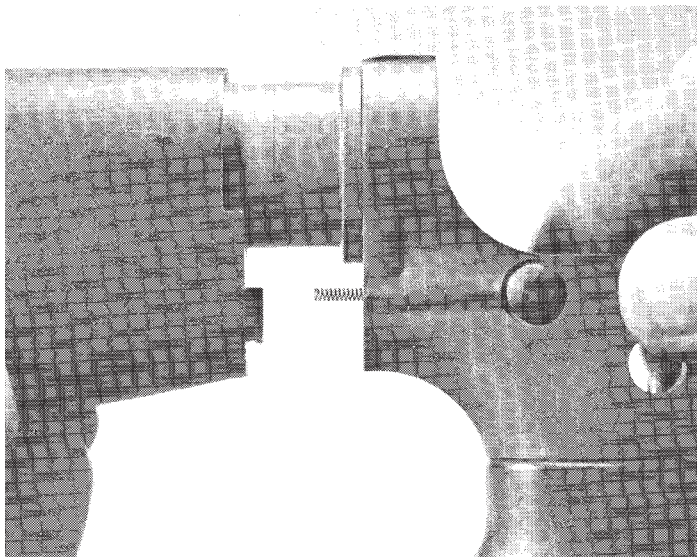
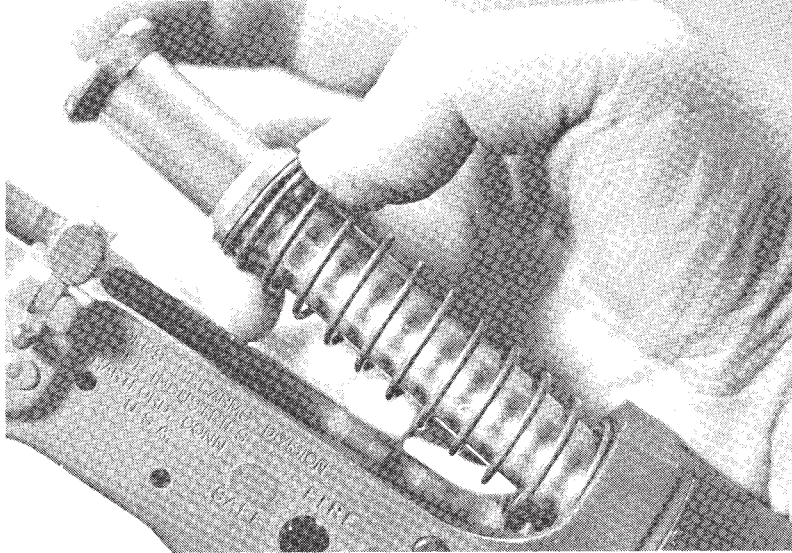


- 28.** The hold open device and its spring are retained on the left side of the grip frame by a roll pin, and after removal of the pin they are taken off toward the left.

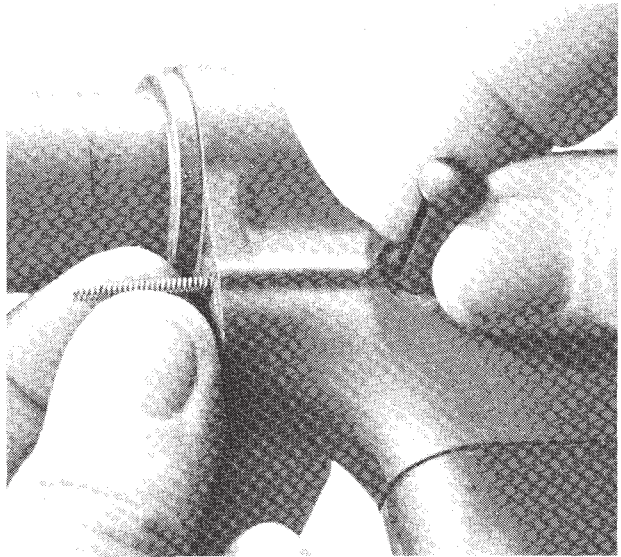
- 29.** Restrain the recoil buffer against the tension of the recoil spring, and depress the buffer stop plunger. **Caution:** *The spring is strong, so take care to keep it under control.*



- 30.** Slowly release the tension of the spring, and remove the buffer and spring toward the front.

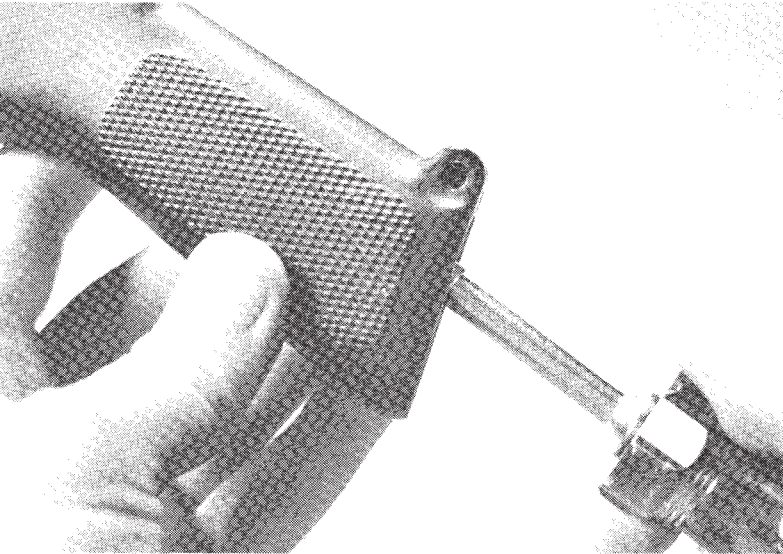


- 31.** Remove the upper screw in the buttplate and remove the buttstock toward the rear. Take care not to lose the takedown pin retaining plunger and its spring at the rear of the grip frame. Removal of the lower screw in the buttplate will give access to the mechanism of the storage compartment cover and its latch.

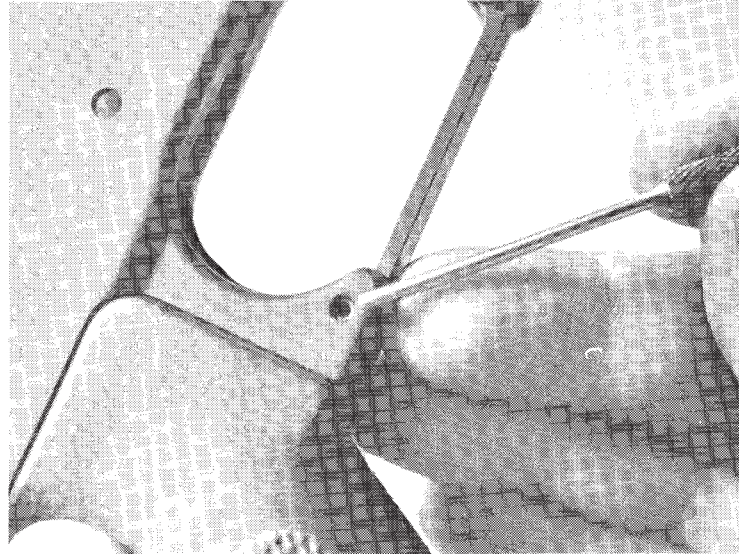


- 32.** Remove the takedown pin spring and plunger from the rear of the grip frame. The takedown pin can then be removed toward the right.

- 33.** The pistol grip is removed by backing out a screw accessible through the bottom of the grip. Note that this will also release the safety plunger and its spring for removal downward.

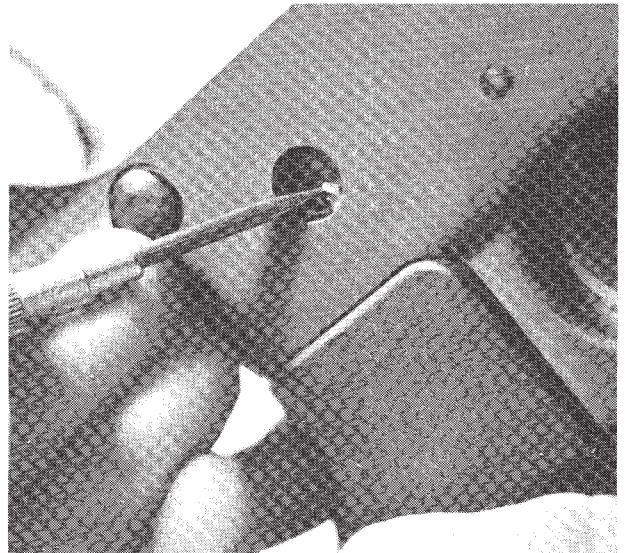


- 34.** The lower section of the trigger guard is retained at the rear by a roll cross pin. After this is removed, the section can be swung downward, and a very small roll pin in its forward hinge will be exposed for removal. The hinge pin can then be taken out toward the right, and the lower section removed.

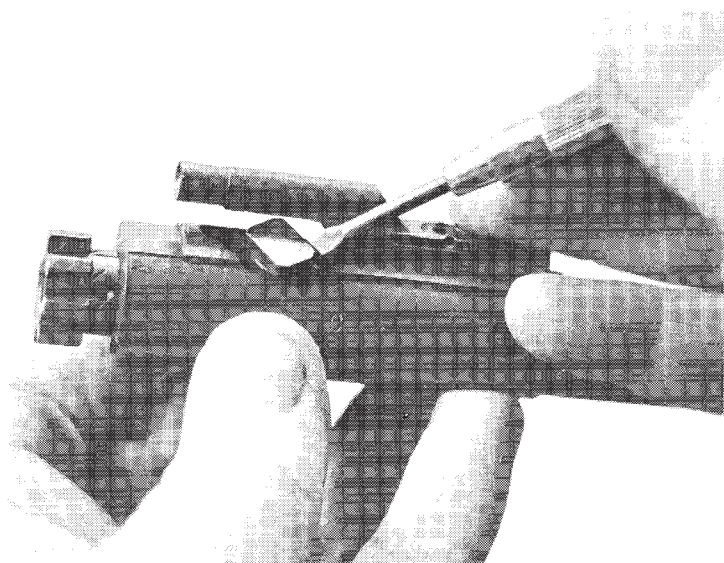


Reassembly Tips:

- 1.** When replacing the safety-lever, use a tool on the right side to depress the safety plunger as the safety is pushed into place.



2. When replacing the cocking handle, remember that its forward end must be inserted into the receiver and then moved upward into its track.



3. When replacing the bolt in the bolt carrier, note that the extractor must be oriented to the upper right, and the ejector to the lower left. Also, remember to turn the bolt cam pin so its flange is beneath the edge of the gas cylinder.



CZ 527 Lux

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the CZ 527 also apply to the following guns:

CZ 527 American

CZ 527 Varmint

CZ 527 Target

Data: CZ 527

Origin: Czech Republic

Manufacturer: Ceska Zbrojovka

Cartridges: .222 Rem, .223 Rem., .22 Hornet

Magazine Capacity: 5 rounds

Overall Length: 42.4 inches

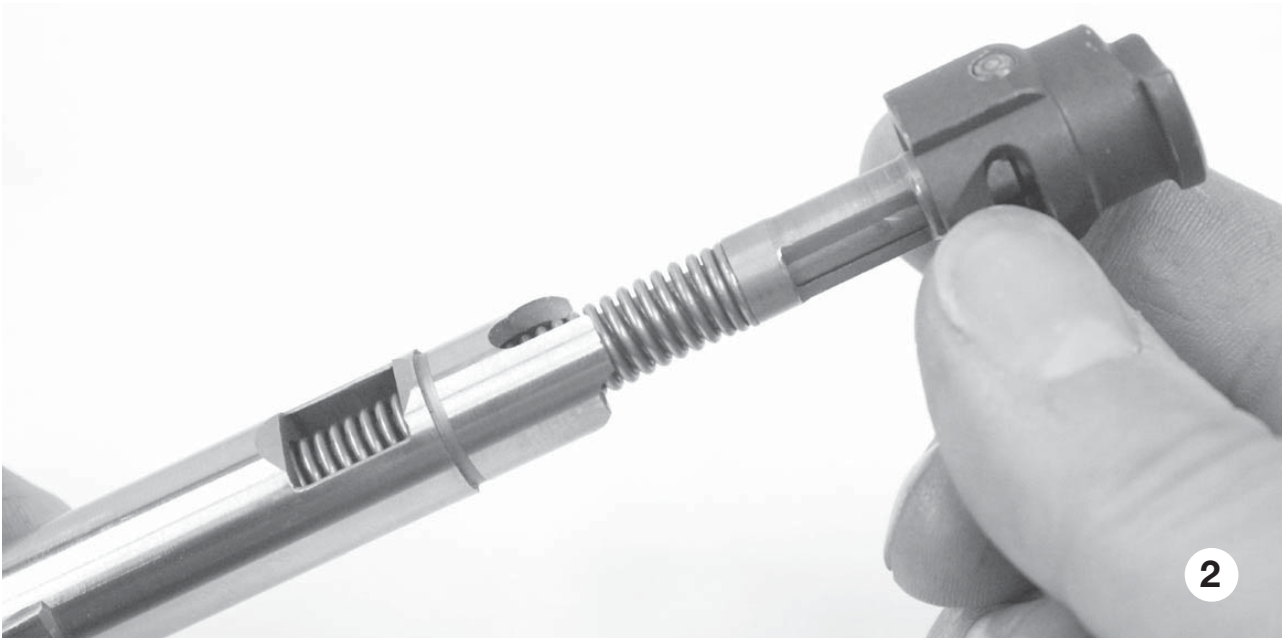
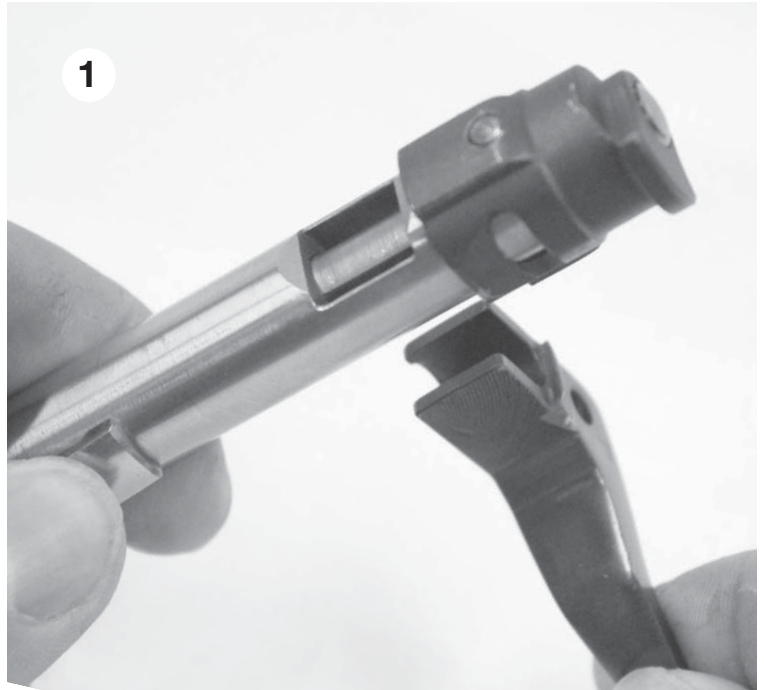
Barrel Length: 23.6 inches

Weight: 6.25 pounds

CZ has a long history of quality arms manufacturing, from Mausers to a variety of pistols. The company's several current lines continue the tradition. The 527 series falls in a medium category, placed between the similar 550 series and the 452/455 rimfire series. Lightweight and accurate, reasonably priced with good styling, and firing low recoil .22 centerfire cartridges, the 527 in several models, including the Lux, also has a single set trigger installed. The 550, while similar, has enough differences to preclude the use of these instructions, as do the rimfire lines. However, with only minor vagaries, the entire line of 527 rifles will follow these steps.

Disassembly:

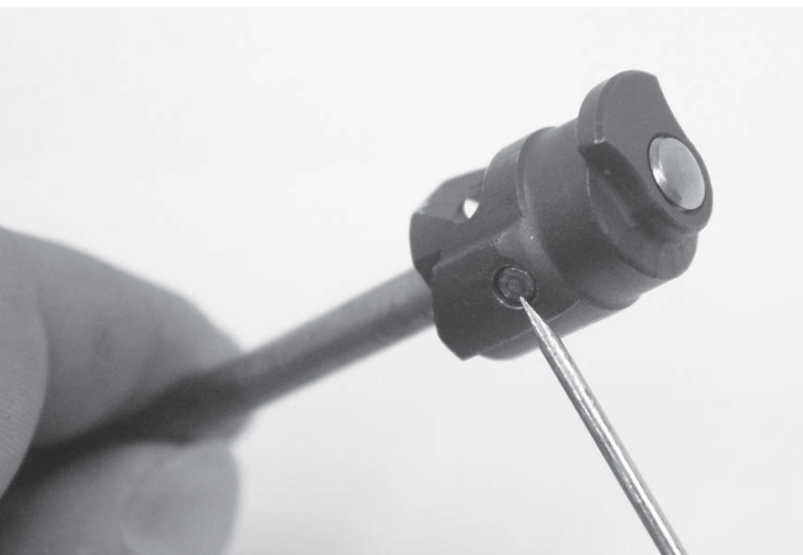
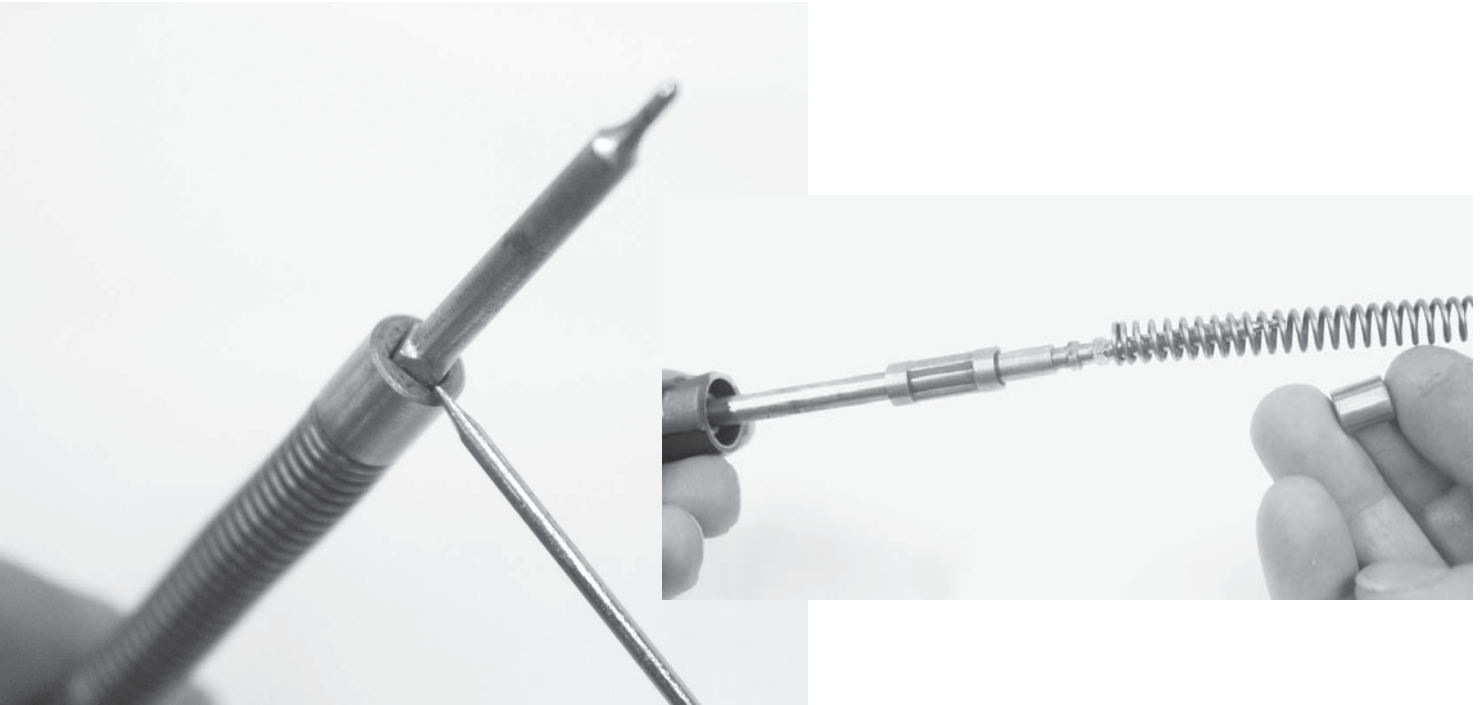
1. To remove the bolt, open the bolt, depress the bolt stop at the rear left side of the receiver, and pull the bolt from the receiver.



2. Pulling back on the bolt shroud and turning it 180 degrees so that the tab on the shroud points toward the “bottom” of the bolt (bottom, from the perspective of the bolt in the rifle; the bolt handle projects from the “right” side), and then pushing the firing pin assembly forward will clear the handle for removal (picture 1). The handle will pull straight out. With the bolt handle removed, the firing pin assembly can then be pulled out of the rear of the bolt body (picture 2).

- 3.** There is a square-holed bushing at the front of the firing pin spring. This bushing should be pushed slightly to the rear, compressing the firing pin spring, and then rotated 90 degrees. The bushing

will then move forward off the firing pin with the spring behind it, followed by the bolt handle catch. Control this spring, as it is still well compressed.

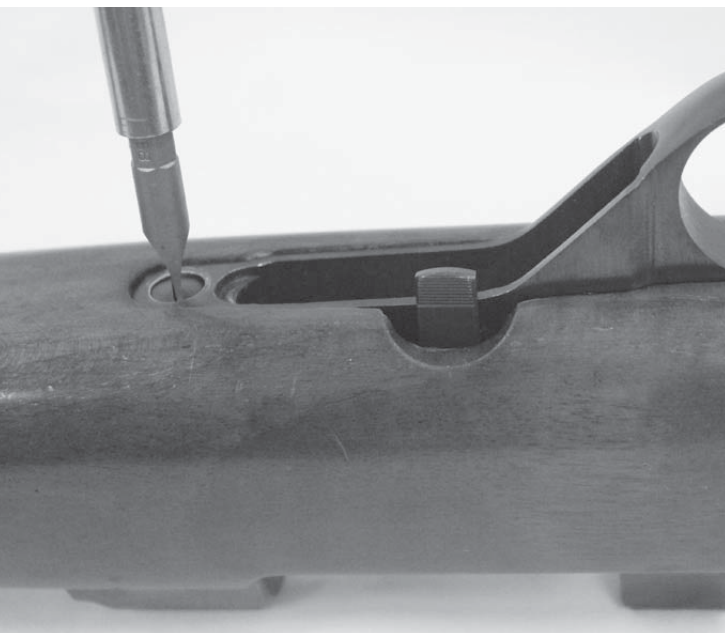


- 4.** Driving out this pin will then allow the shroud to be unscrewed from the firing pin.



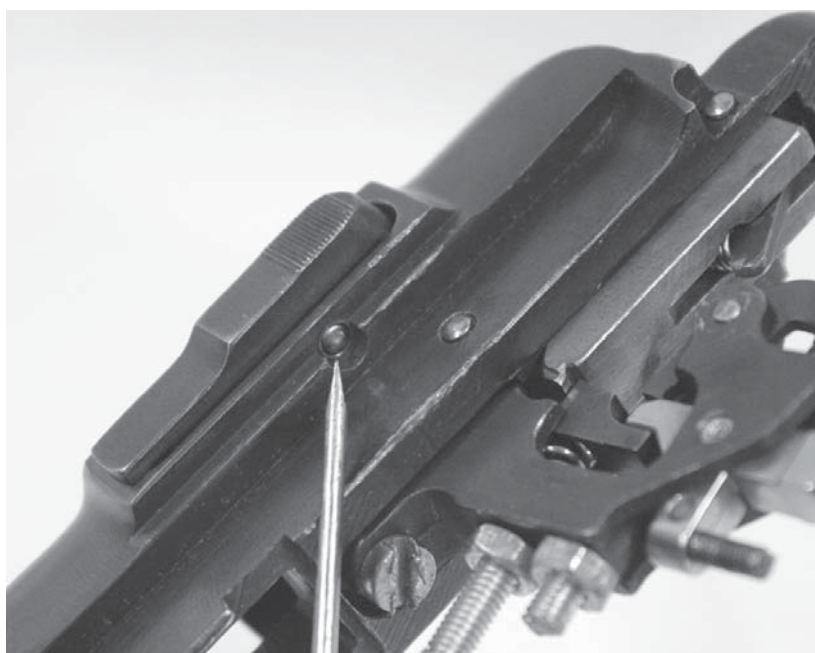
- 5.** The extractor can be removed by rotating it so that the tab just behind the claw that rides in the bolt groove moves past and out of the groove. The extractor can then be pushed forward to disengage it from its ring. The extractor ring, however, should be left in place, as removing it may bend it out of round.

- 6.** Remove the two action screws, one in front of the magazine well and the other behind the trigger guard.



- 8.** The mag catch spring will likely fall free when the action is removed from the stock, but this is where it is located on the receiver and can now be removed if it remains.

- 7.** Carefully lift the trigger guard from the stock. The magazine catch on the left side of the magazine well should also accompany the triggerguard assembly. The mag catch is not retained by anything but the stock. The barreled action can now be removed from the stock.



- 9.** Push out this pin to remove the ejector assembly. This assembly consists of two springs, one large and one small, and the ejector and bolt stop.

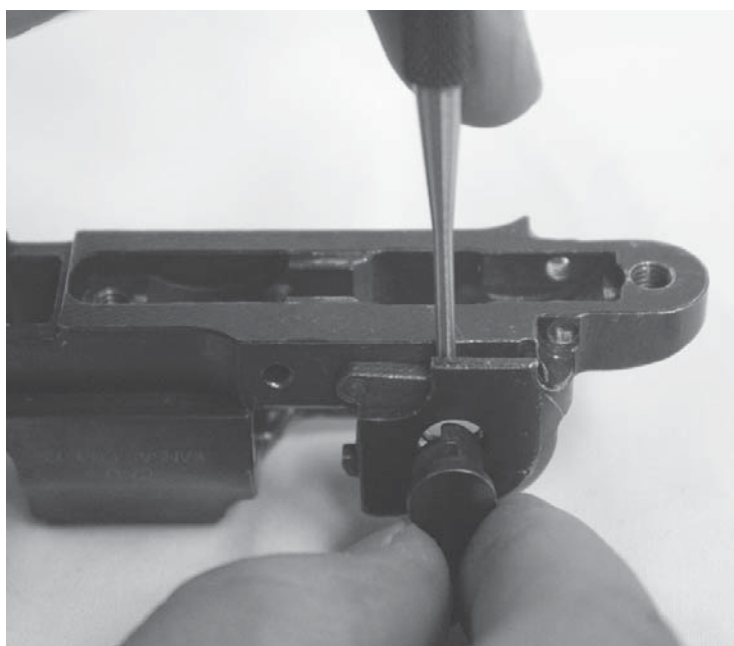
- 10.** This large screw at the front of the trigger housing must be removed. It may be necessary to first remove the trigger pull weight adjustment screw just above it to allow screwdriver clearance.



- 11.** Drive out this pin to free the trigger assembly.

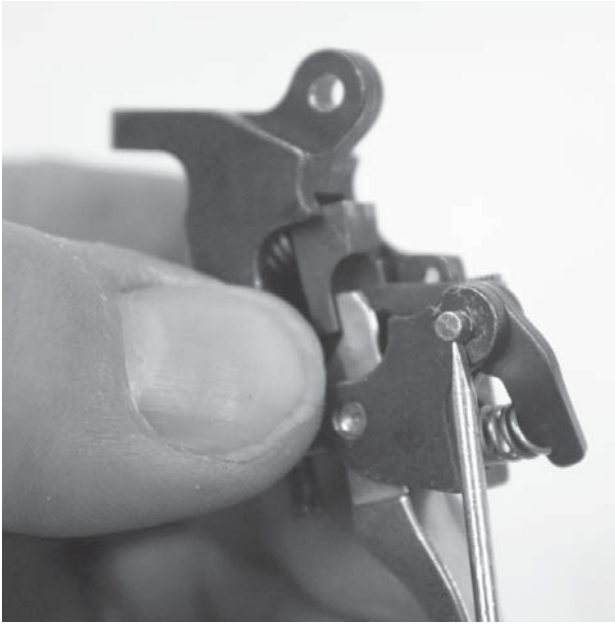


- 12.** Drive out this pin to remove the sear and its spring and stop.



- 13.** Rotating the safety bar to its "fire" position. Remove it by depressing its catch plate upward into the receiver while simultaneously pulling the safety out to the side.

- 14.** The trigger assembly (in this case a single set trigger) can be disassembled by first pushing out this set trigger pin. This in turn will free the set trigger lever and spring.



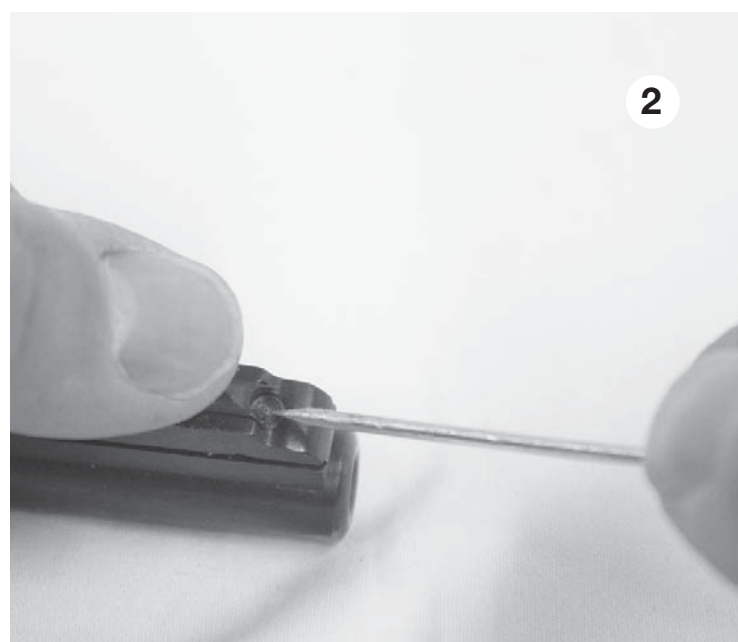
- 15.** Driving out the trigger pin will free the trigger and the trigger lever. This pin is normally riveted in place and it is generally not advisable to remove it unless something in the trigger needs to be replaced. The trigger pull weight spring sits in front of the trigger lever and will also come out when this pin is removed.



- 16.** The three remaining screws on the trigger housing control sear engagement (small black set screw indicated at the rear), trigger pull weight (top front), and overtravel (front bottom). If these screws are removed, the trigger will have to be fully and safely reset.



- 17.** The rear sight is held in by a simple dovetail and can be removed by driving it to the right.



- 18.** The front sight shroud must be removed by pushing it forward off the front sight ramp (picture 1). The front sight blade is removed (or exchanged for a blade of different height) by depressing the button at the front of the sight ramp and sliding the sight blade forward out of the slot in the ramp (picture 2).

Reassembly Tips:

1. To ease reassembly of the bolt, the bolt handle catch should be arranged so that its flats are top and bottom in relation to the bolt shroud.



3. This is the orientation of the magazine spring. It is best to place it on the receiver and then insert the receiver into the stock while holding the magazine catch in the tensioned position and sort of rolling the receiver slightly so that the spring falls outside the mag catch. If you do this, the spring should seat itself on the catch.



2. The bolt handle should be inserted so that the handle knob is pointing in the direction of the solid bolt lug, not the lug with the ejector slot.



Dixie Sharps Model 1874

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Sharps Model 1874 also apply to the following guns:

Original Sharps rifles and carbines, and other modern reproductions.

Data: Sharps Model 1874

Origin: Pedersoli, Italy

Importer: Dixie Gun Works,
Union City, Tennessee

Cartridge: .45-70 Govt.

Overall length: 47-1/2 inches

Barrel length: 30 inches

Weight: 10 pounds 6 ounces

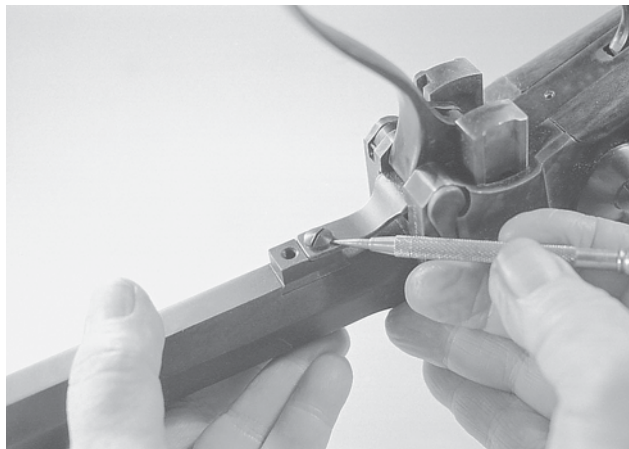
Christian Sharps patented the basic design of this rifle in 1848. The first metallic cartridge versions were made in 1869. The excellent modern reproductions have only one or two tiny differences in the design. The gun shown here is the Dixie Target/Hunter, a beautiful gun.

Disassembly:

1. Remove the two screws in the fore stock, and take it off downward. If you have an original or military-style gun, there will also be barrel bands with spring-depression locks to be removed.



2. Open the breech to relieve the tension of the lever spring. Remove the screw, and take off the spring.

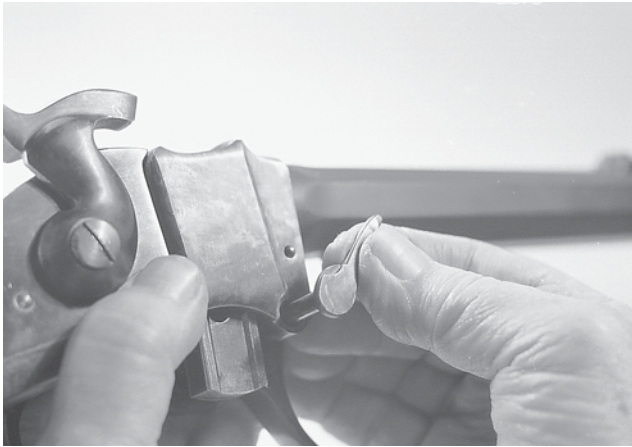


3. If total takedown is intended, as for refinishing, removal of this screw will allow you to take out the lever pivot pin latch spring and plunger. If this is not the case, see #4.

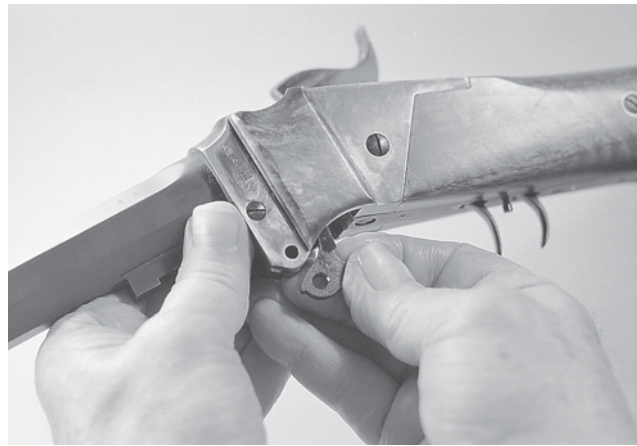


4. Depress the latch plunger, and turn the arm of the lever pivot out of its lock flange on the receiver.

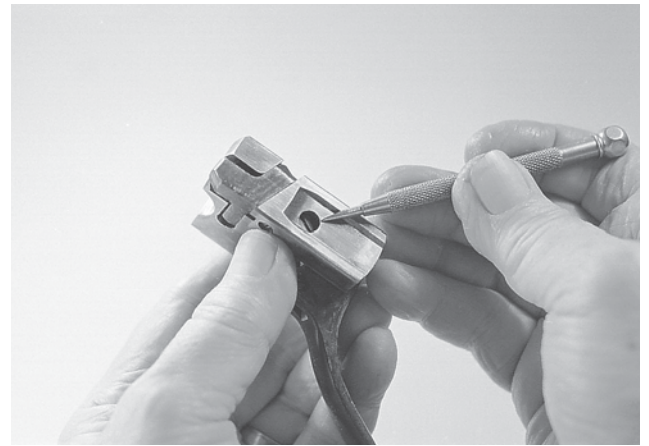
- 5.** Remove the lever pivot pin toward the right.



- 6.** Remove the lever and the attached breechblock downward.



- 7.** Remove the ejector downward.

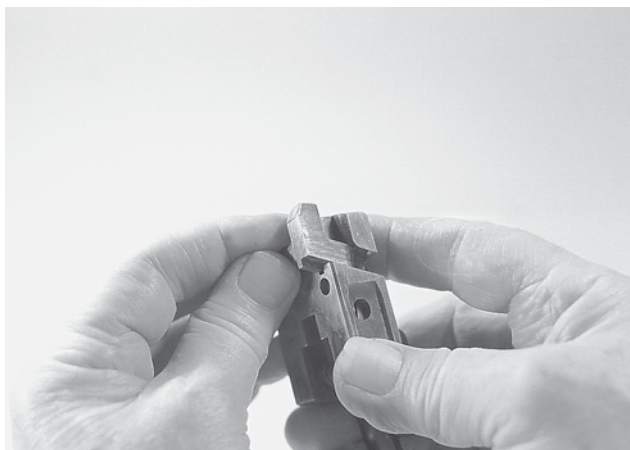
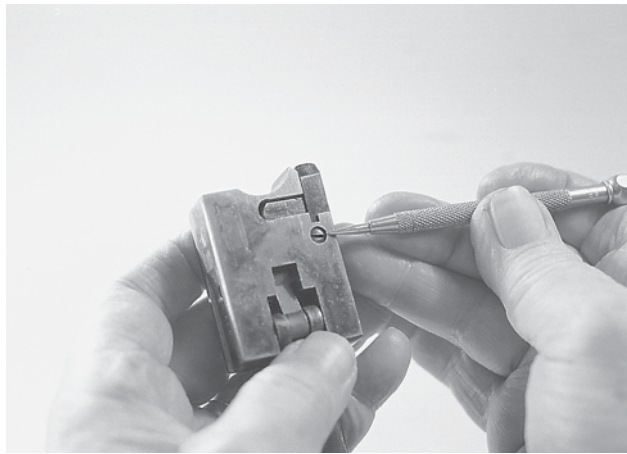


- 8.** Removal of this recessed screw will allow the lever and its link to be separated from the breechblock.

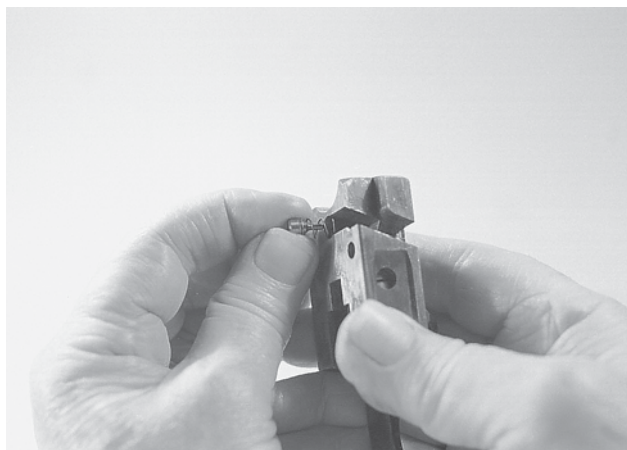
- 9.** The link is retained and pivoted on the lever by this cross-screw.



- 10.** Control the firing pin transfer block, and remove the retaining screw.



- 11.** Ease out the transfer block and remove it. On an original Sharps, the firing pin is an integral part of this unit, and there is a screw-retained leaf spring.



- 12.** Remove the firing pin and its return spring.

- 13.** Set the hammer in its mid-position (loading notch), and remove the front lock-plate screw.



- 14.** Remove the rear lock-plate screw. Note that the screws are not identical, so keep them separate for reassembly.

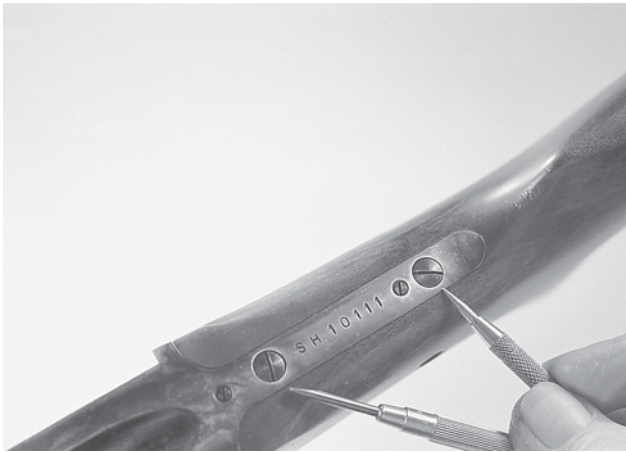


- 15.** Remove the lock-plate.

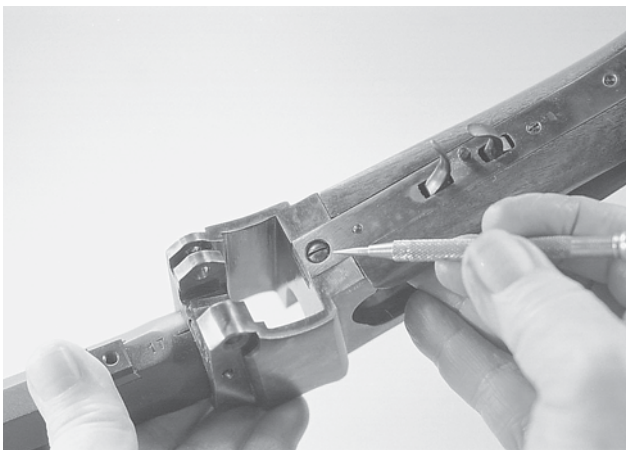
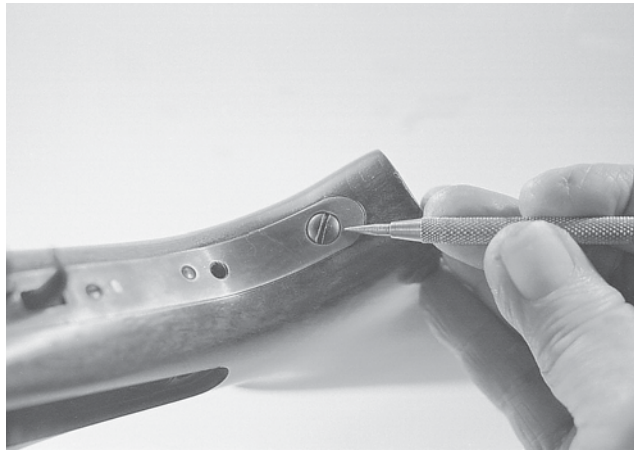


- 16.** If you do not have a mainspring vise (the one shown is from Dixie Gun Works), it would be wise to avoid disassembly of the lock. After the spring is compressed by the vise, its side-post is pulled out of the lock-plate for removal. Removal of the three screws to the left will release the bridge and the sear. In normal takedown, the hammer and tumbler are not separated.

17. Remove the two large screws in the upper tang of the receiver. Note that they are not of equal length.



18. Remove the wood-screw at the rear of the trigger plate.



19. Remove the screw at the front of the trigger plate.



20. Remove the buttstock from the receiver.

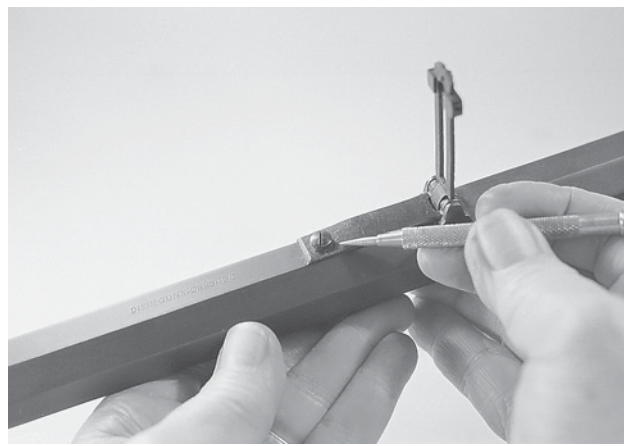
21. Remove the trigger plate from the buttstock.



22. If the trigger assembly is to be taken apart, first remove the trigger springs at front and rear.

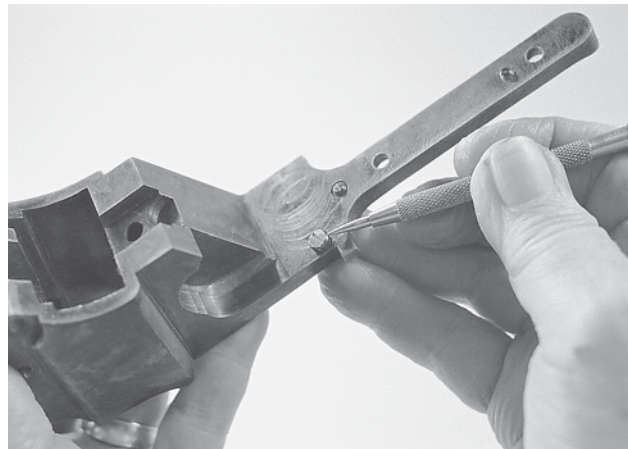


23. After the springs are removed, (they are still in place in this photo) drifting out the crosspins will release the triggers to be taken out. The two adjustment screws are best left in place.



24. If the rear sight is to be drifted out of its dovetail mount, first remove the sight spring. The front sight is also dovetail mounted.

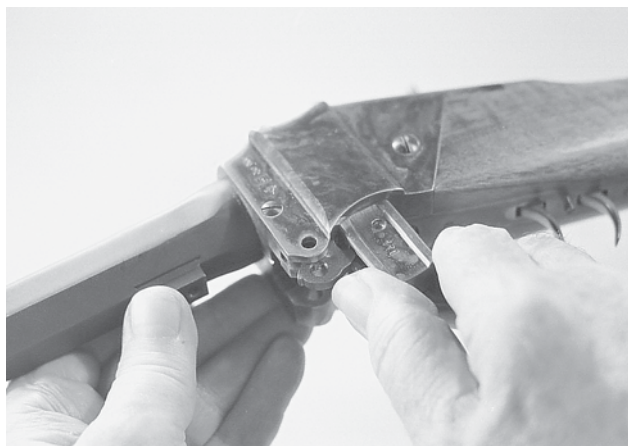
- 25.** This screw, on the upper inside of the receiver, is a limit or bearing screw that retains no part. It can be left in place.



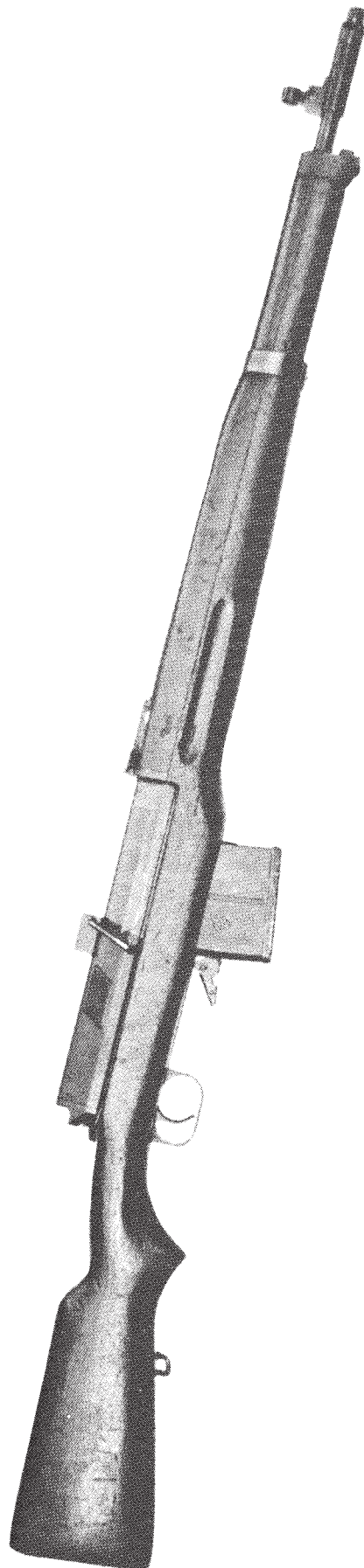
Reassembly Tips:



- 1.** When installing the ejector, it goes into its slot in the orientation shown here.



- 2.** For reinsertion, it is best to hook the ejector into the breechblock, as shown.



Egyptian Hakim

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Egyptian Hakim also apply to the following guns:

Swedish Ljungmann AG42

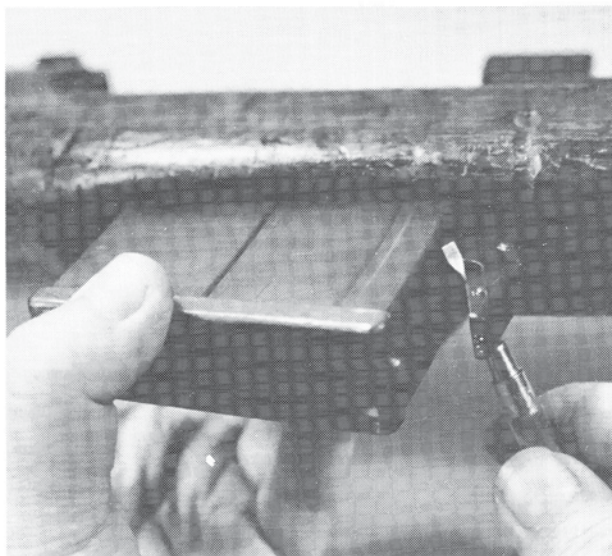
Swedish Ljungmann AG42B

Data:	Egyptian Hakim
Origin:	Egypt
Manufacturer:	Egyptian arsenals
Cartridge:	7.92mm Mauser
Magazine capacity:	10 rounds
Overall length:	47.80 inches
Barrel length:	24-1/2 inches
Weight:	10 pounds 6 ounces

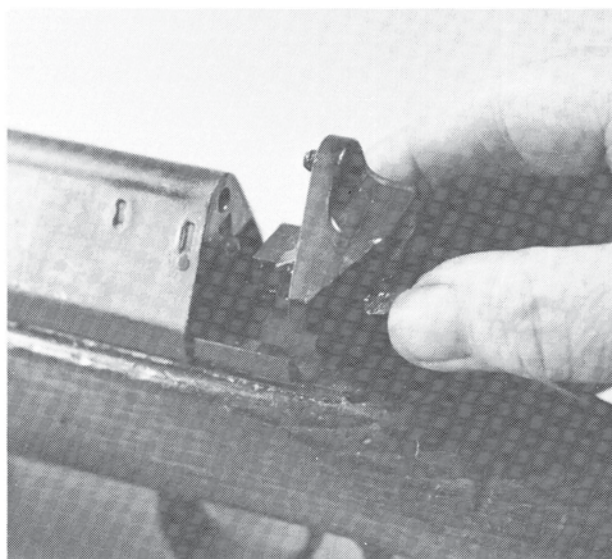
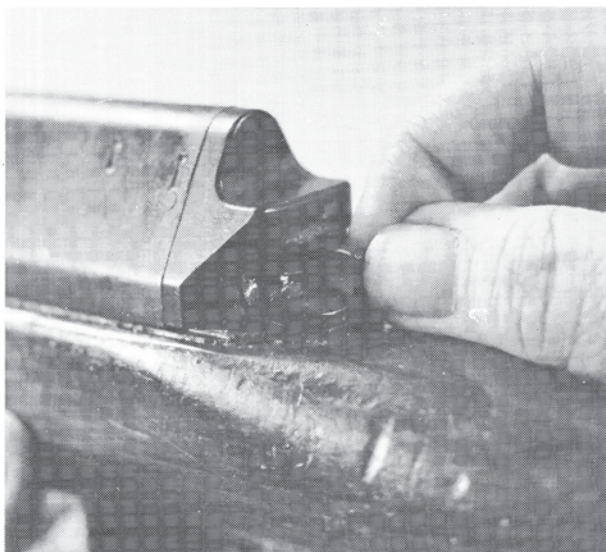
The Hakim is the Egyptian version of a rifle that originated in Sweden. The original Swedish guns were the AG42 and AG42B, popularly known as the Ljungmann or the Eklund-Ljungmann, after the designer and the gas system. Mechanically, the AG42B and the Hakim are identical. The earlier AG42 has some small differences in the trigger and extractor, but these will cause no difficulty in takedown or reassembly.

Disassembly:

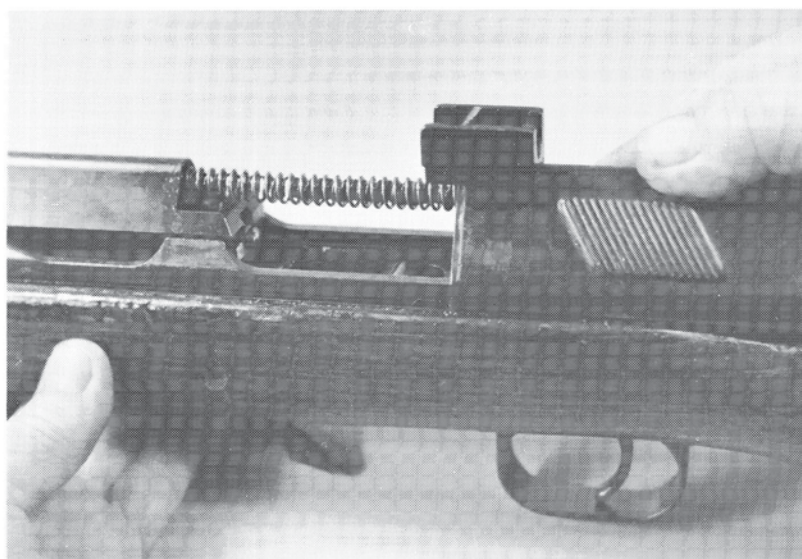
1. With the internal hammer in the fired position, remove the magazine. If the catch has been locked for top loading, it will be necessary to insert a tool to unlock it, as shown. The catch is then pushed toward the magazine to release it.



2. Set the safety-lever in central position, as shown.



3. Move the bolt cover forward until it is clear of the receiver end piece, and lift the end piece straight up for removal.

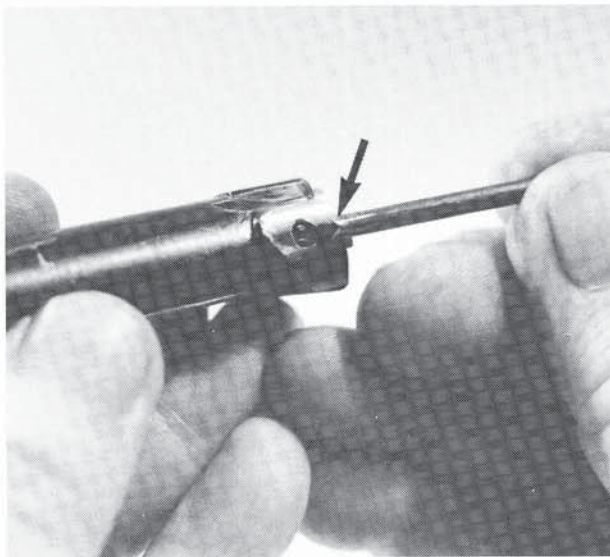
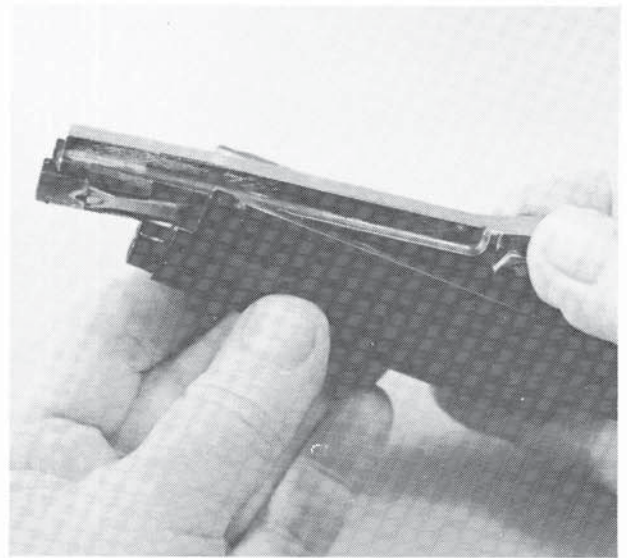


4. Remove the cover and the recoil spring system toward the rear. The springs are easily taken out of the cover.

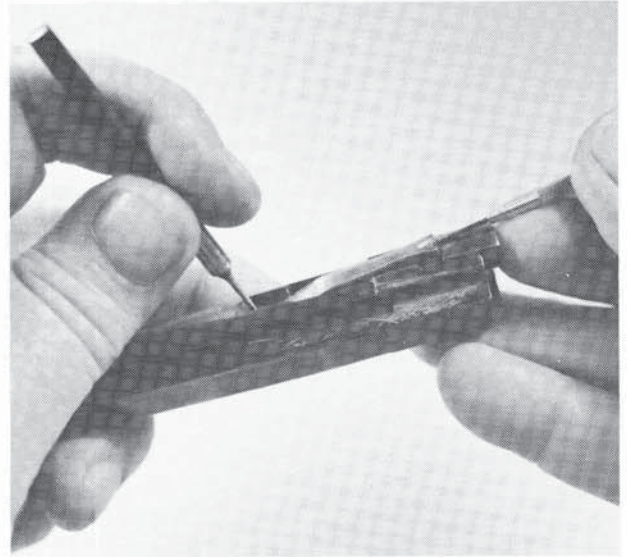
- 5.** Move the bolt and bolt carrier assembly rearward out of the receiver.



- 6.** Invert the carrier. Lift the bolt at the rear, and move it forward out of the bolt carrier.

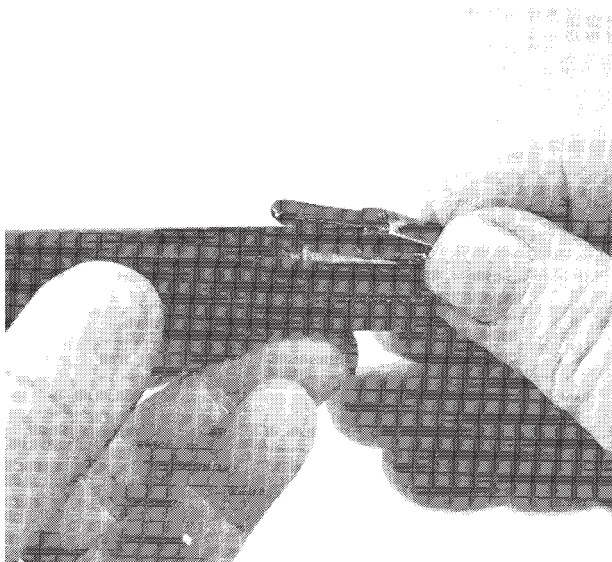


- 7.** The firing pin and its return spring are retained in the bolt by a cross pin that has a split-end lock tip on the left side of the bolt. Make a tool with a V-end, such as the one shown (arrow), to compress the lock tip and push the pin out toward the right. The firing pin and its spring are then taken out rearward.

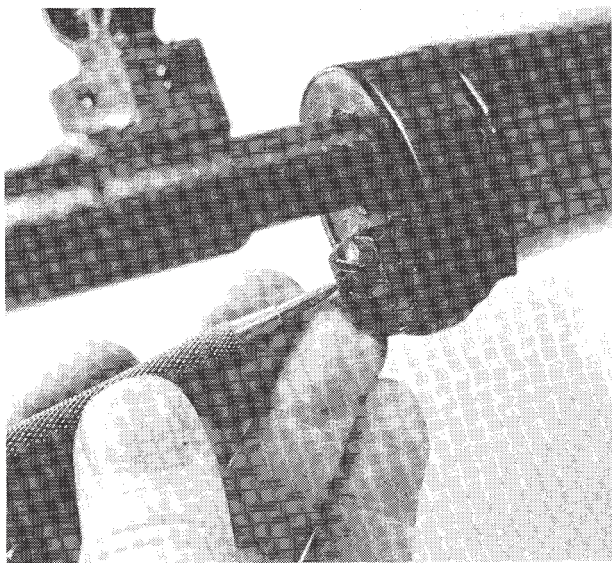
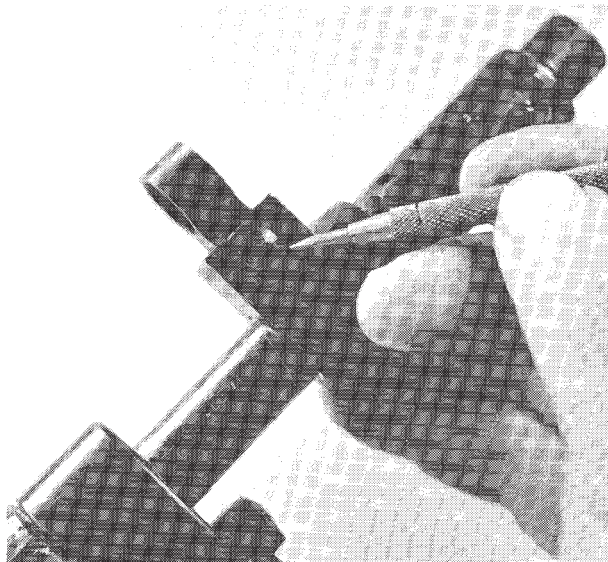


- 8.** There is an access slot at the rear edge of the extractor. Insert a small tool, and lift the front of the extractor spring until it clears the shoulder on the extractor. Use a small drift in the notch at the rear of the spring to push it forward for removal.

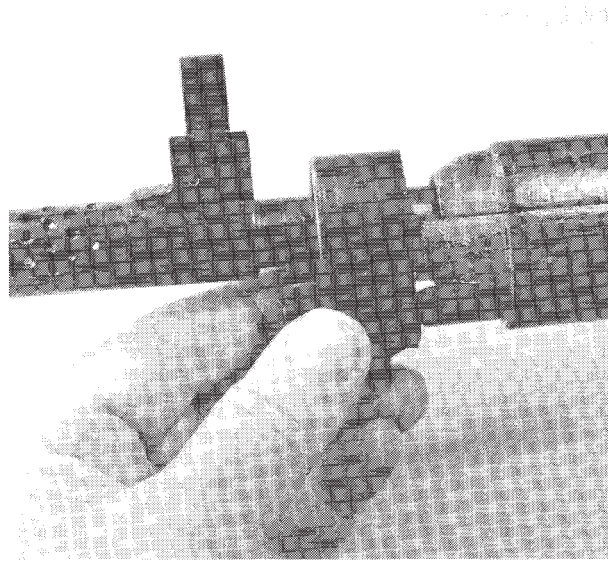
- 9.** Tip the extractor forward and remove it from its recess in the bolt.



- 10.** If the front sight is to be removed, turning the adjustment screw counter-clockwise will move it out of its dovetail. If removal of the entire unit is too be done, it is necessary to use a tool to unscrew the nut at the muzzle.

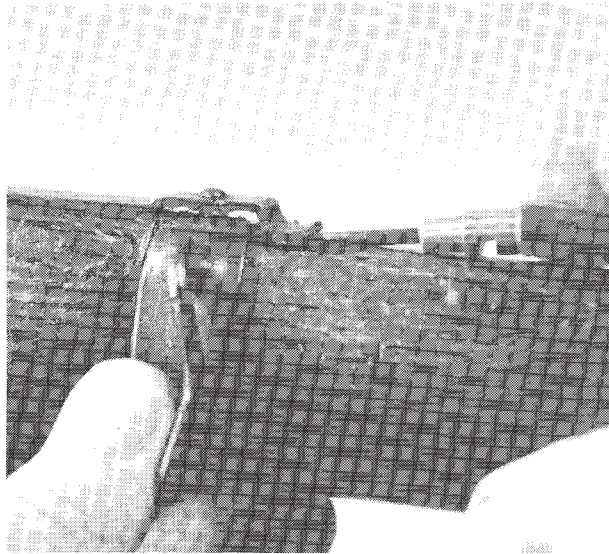


- 11.** Remove the screw on the underside at the front of the forward barrel band.

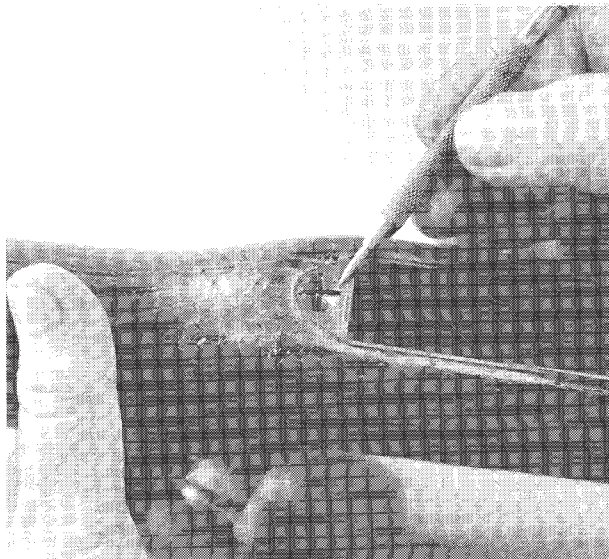
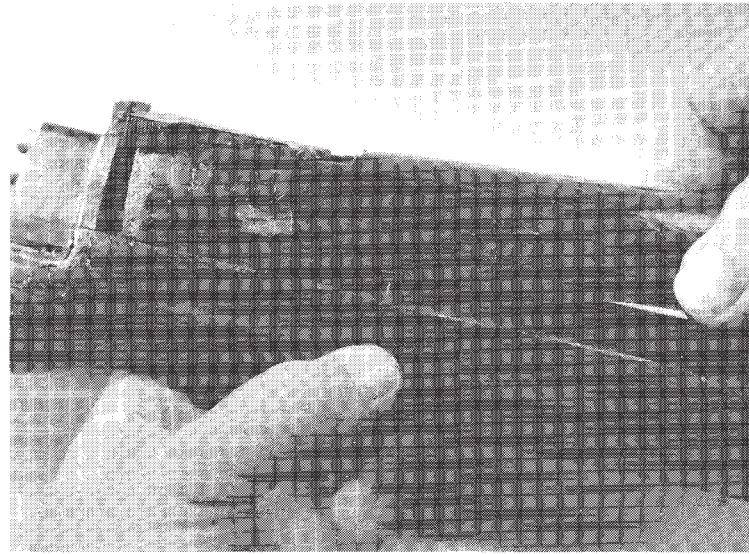


- 12.** Slide the front barrel band forward off the stock.

- 13.** Insert a tool to lift the middle band latch until its inner lug clears, and slide the band off toward the front.

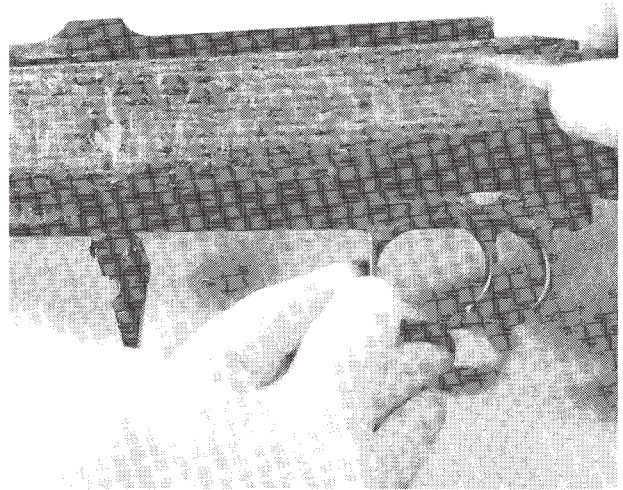


- 14.** Lift the upper handguard at the front, and take it off toward the front.

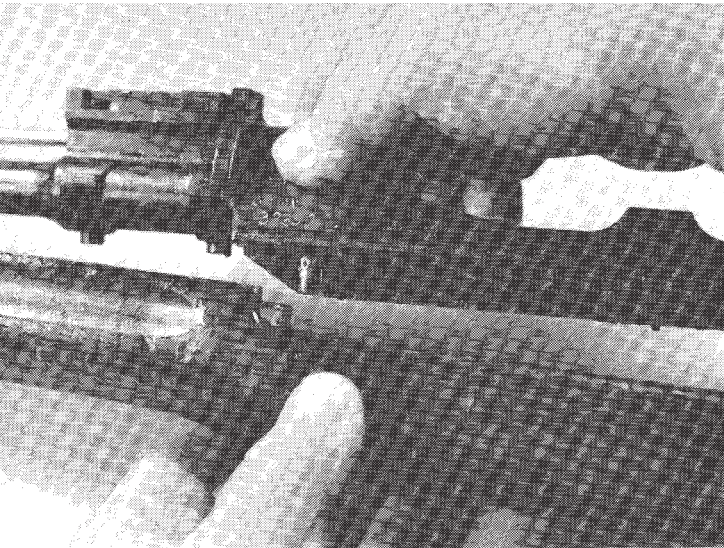


- 15.** Remove the three screws on the underside, at the front of the magazine plate, just behind the catch and at the rear of the trigger guard. If the gun has not been previously disassembled, these screws may be heavily staked in place, and removal may be difficult.

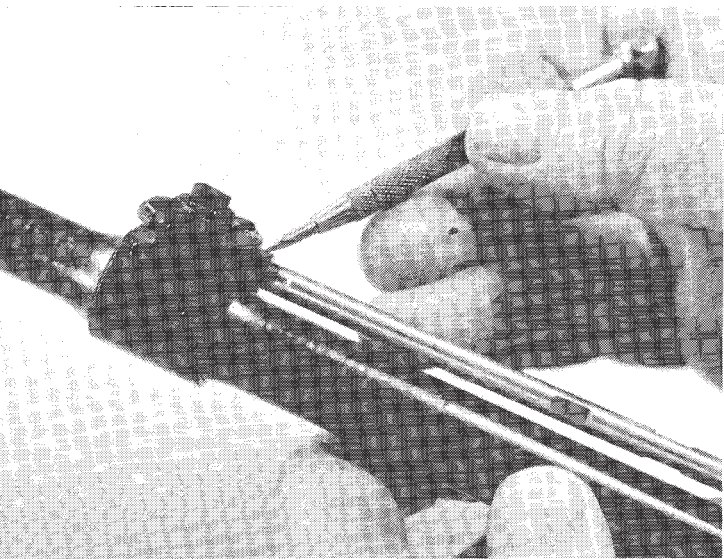
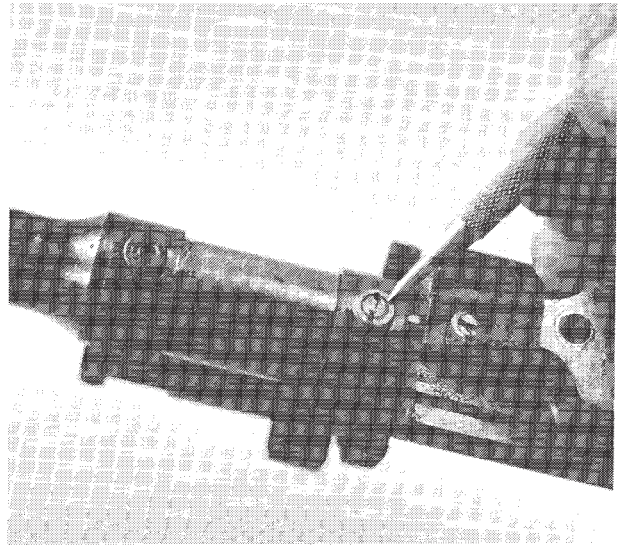
- 16.** Remove the trigger guard and magazine housing unit downward.



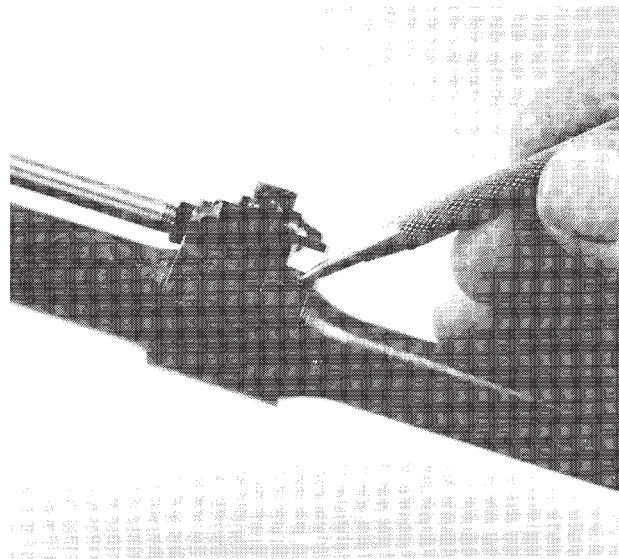
- 17.** Remove the action from the stock.



- 18.** The retainer for the rear sight is secured by two screws on the underside. After removal of the screws, the retainer clips can be moved to the center, and the sight base can be taken off, along with the rear collar for the upper stock handguard.

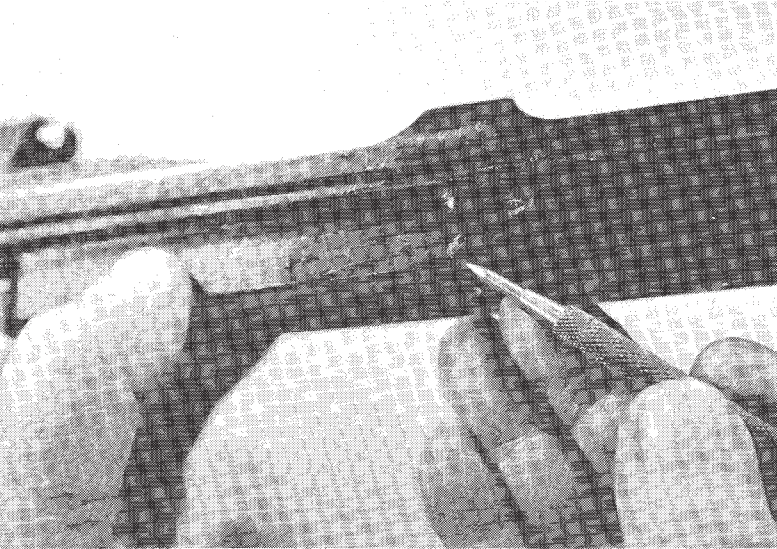


- 19.** If the gas tube is to be removed, the lock nut at the front must first be loosened. The tube has two wrench flats for removal. Avoid any extreme pressure that might deform the tube.

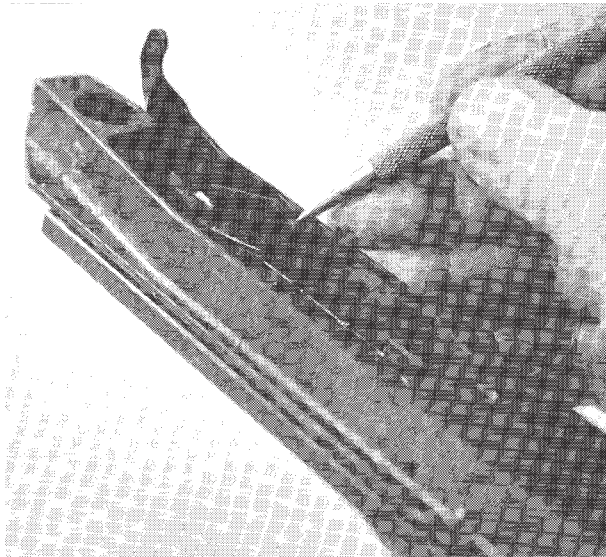
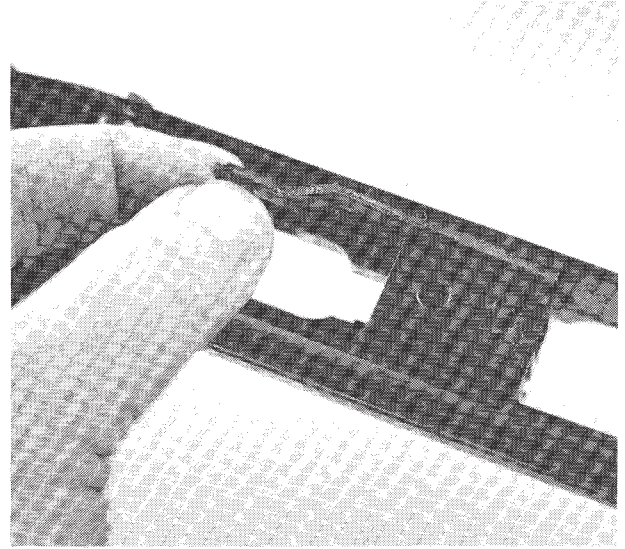


- 20.** A special wrench is required for the gas adjustment valve, and any attempt to take it off without the tool may damage it. In normal takedown, it is best left in place. If removal of the entire unit is necessary, it is retained by a riveted cross pin. After removal of the pin, the unit is driven off toward the front. Again, it is best left in place.

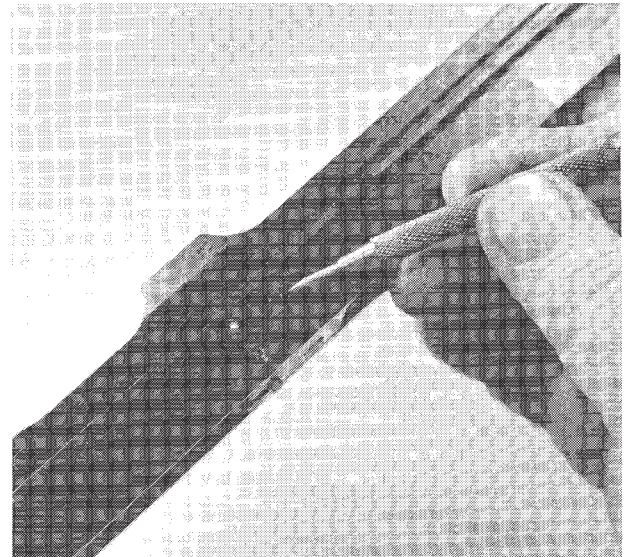
- 21.** The bolt hold-open device is retained in the underside of the receiver by a cross pin that is heavily staked in place. After removal of the pin, the latch and its spring are taken out downward.



- 22.** Drifting out the hold-open latch cross pin will also release the disconnect and its spring for removal.

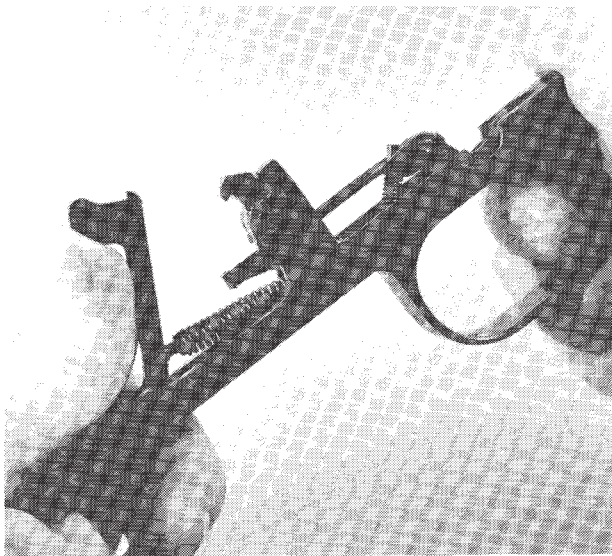


- 23.** The safety arm and its spring are retained by a large screw inside the receiver, and a nut on the outside. These components are staked in place, and should be removed only for repair.

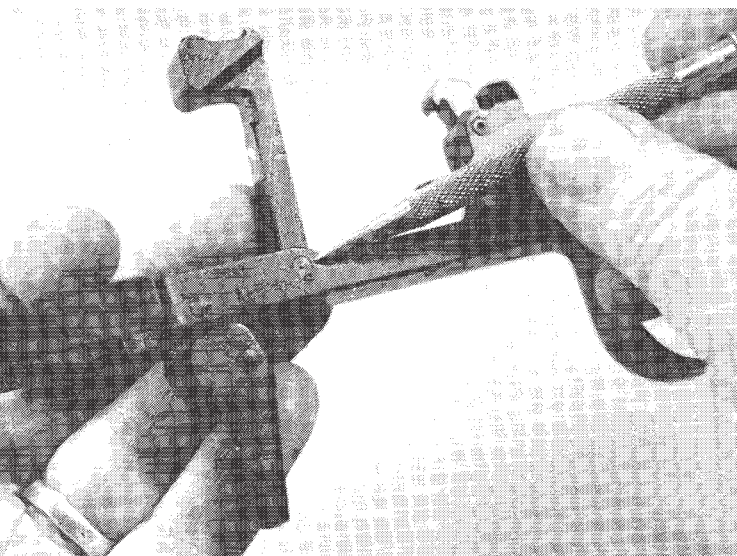
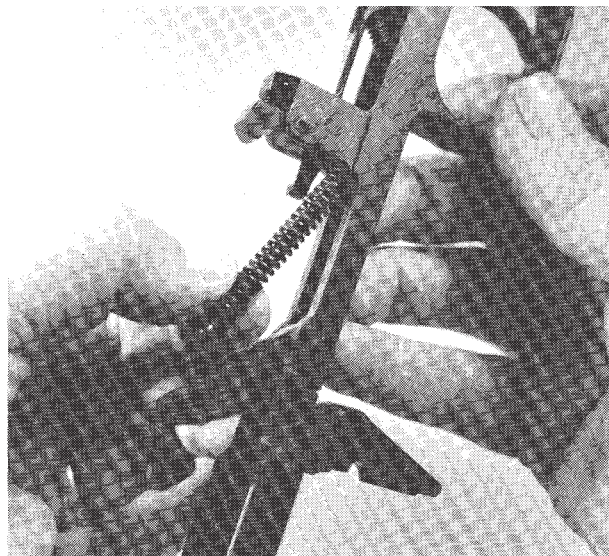


- 24.** This heavily-staked screw on the left side of the receiver retains the ejector. After the screw is removed, the ejector stabilizer pin, just forward of the screw, must be drifted out to free the ejector. The pin must be pushed out toward the left from inside the hold-open recess.

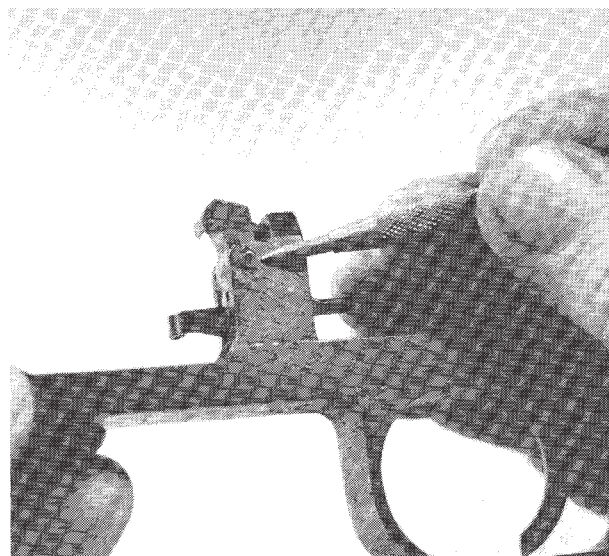
- 25.** Restrain the hammer, pull the trigger, and ease the hammer down to its forward-most position.



- 26.** Remove the hammer and its follower.

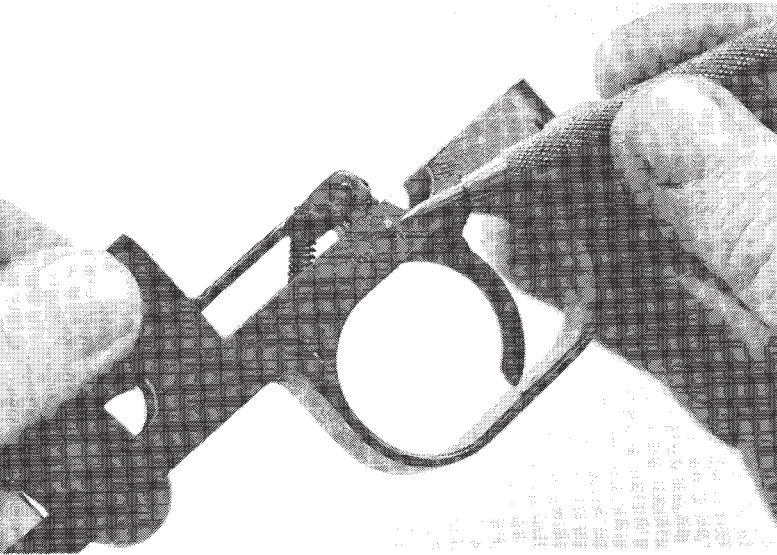


- 27.** Drifting out this cross pin will allow removal of the hammer. Drifting out the smaller pin, just forward of this one, will release the magazine catch and its spring for removal.

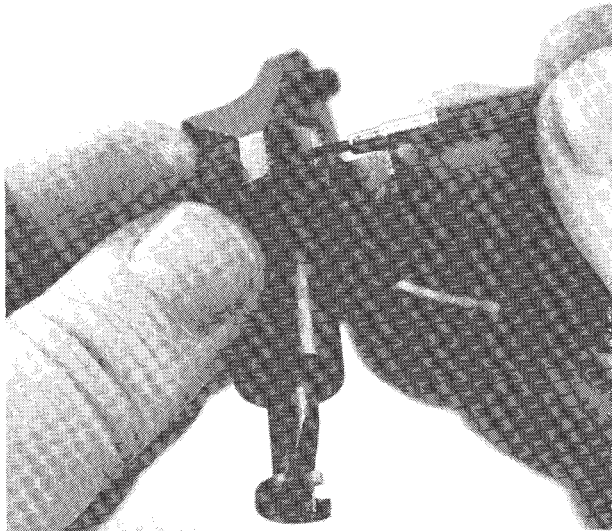
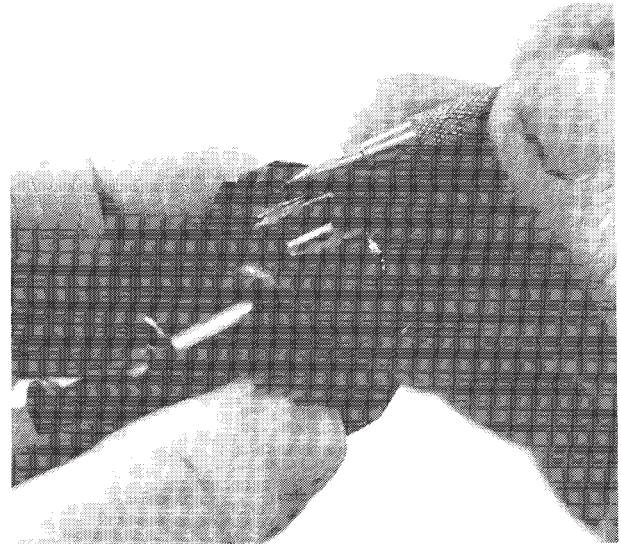


- 28.** The sear and its spring are retained by this cross pin. Like the others in the firing system, this pin is heavily riveted, so removal should be only for repair purposes.

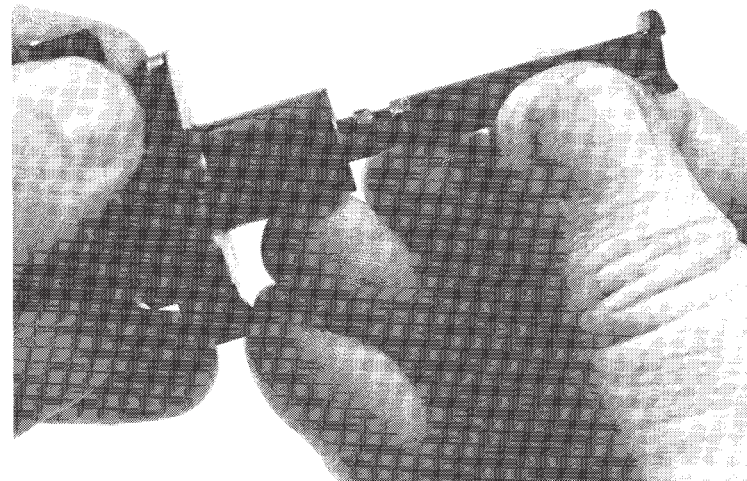
- 29.** After the sear is removed, drifting out this cross pin will release the trigger and its spring and plunger for removal. Control the spring and plunger as the trigger is taken out. The trigger bar is retained on the trigger by a riveted cross pin.



- 30.** To remove the safety-lever from the receiver end piece, first take out this screw, in the front face of the unit on the right side.

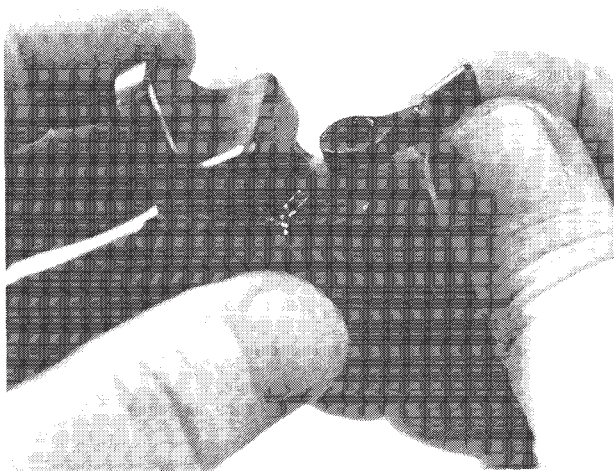


- 31.** After the screw is out, insert a small tool to nudge the retainer outward for removal.

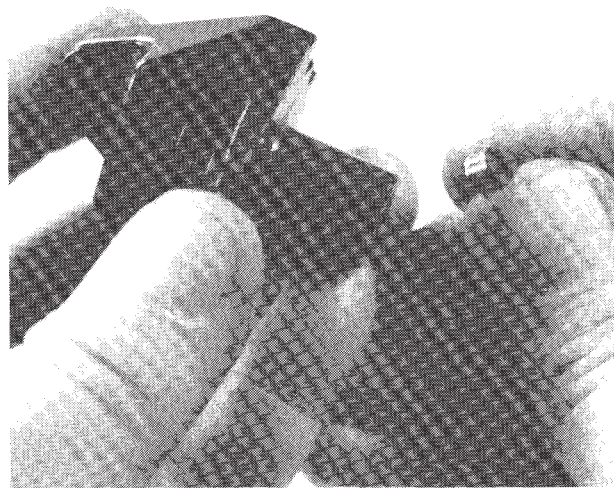
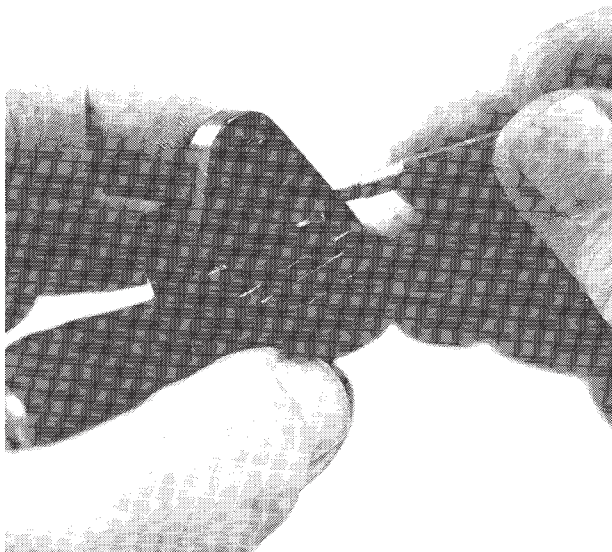


- 32.** Remove the safety shaft downward.

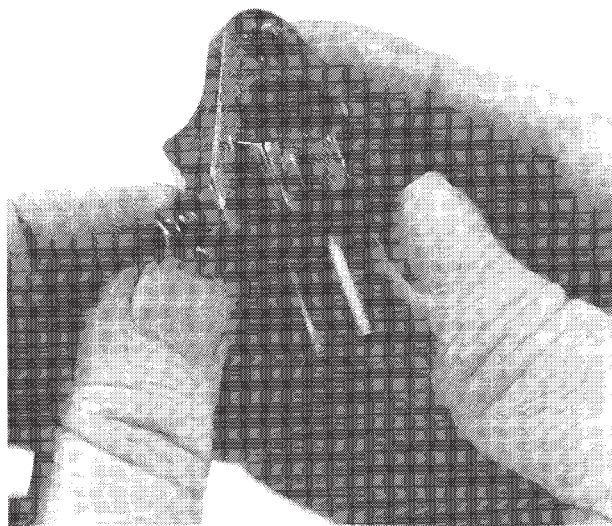
33. Remove the safety-lever toward the rear.



34. Remove the bolt trip cam from its recess.



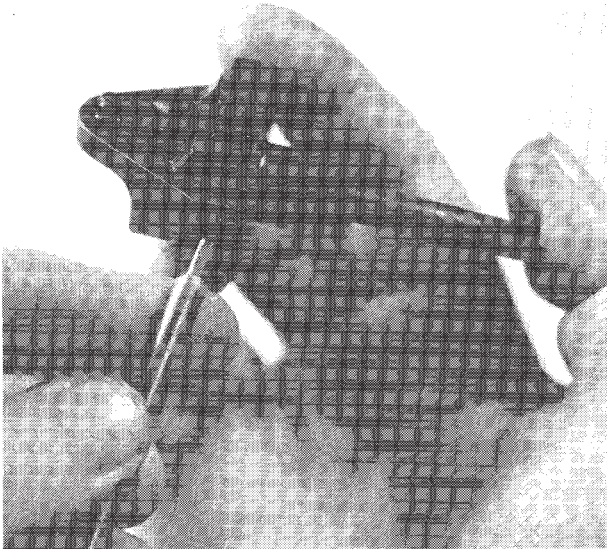
35. Remove the positioning plunger and its spring.



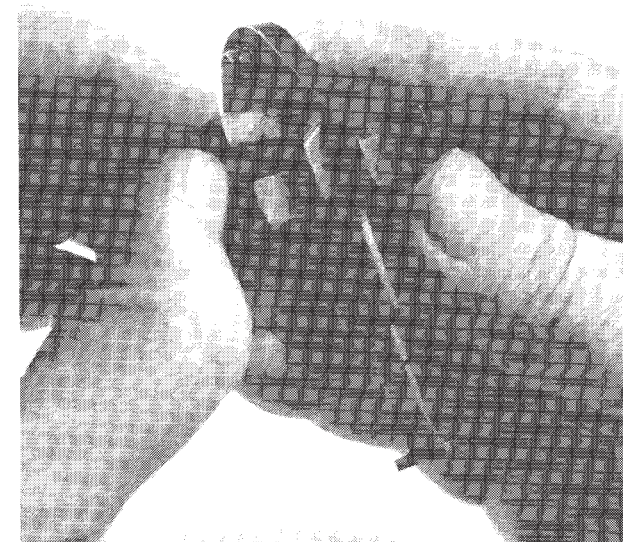
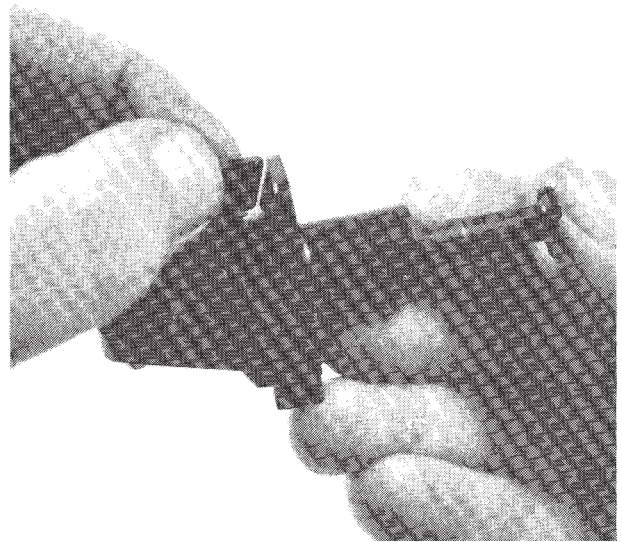
36. A tool may be necessary to remove the positioning plunger spring.

Reassembly Tips:

1. When replacing the safety shaft in the end piece, it is necessary to insert a tool to depress the positioning plunger.



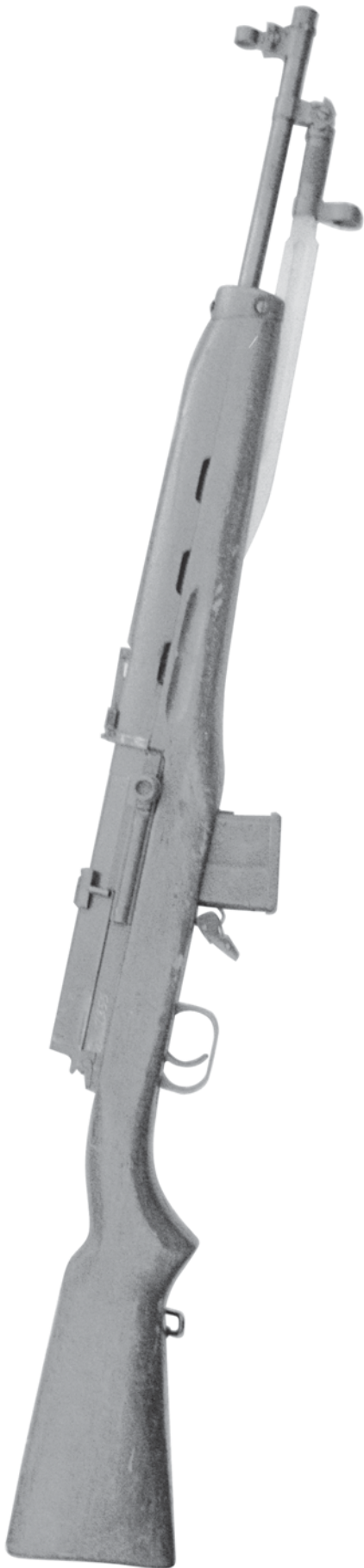
2. As the shaft is pushed upward through the square aperture in the safety-lever, be sure the cut in the end of the shaft is toward the left side, as shown.



3. With the safety-lever in the off-safe (fire) position, put in the bolt trip cam with its flat toward the left, as shown.



4. The bolt must be in unlocked position as the bolt and carrier are put back on the receiver. When the front of the bolt reaches the hammer, the hammer must be depressed to clear the bolt.



Egyptian Rasheed

Data:	Egyptian Rasheed
Origin:	Egypt
Manufacturer:	State Factory 54, Port Said, Egypt
Cartridge:	7.62 x 39mm
Magazine capacity:	10 rounds
Overall length:	42.4 inches
Barrel length:	22.45 inches
Weight:	8-1/4 pounds

For several years, the Egyptian Military had been using the Hakim rifle, a modified version of the Swedish AG42B. Around 1955, designers there combined some features of the Hakim with those of the Russian Simonov to create this neat little carbine. It had a rather short issue time, as they soon adopted their version of the Kalashnikov. However, many of the Rasheed guns were sold as surplus in the U.S.

Disassembly:

1. Cycle the bolt to cock the internal hammer, and remove the magazine. In military use, this carbine is loaded via stripper clips from the top, and there is a spring lock on the magazine catch. It is shown here in locked position.



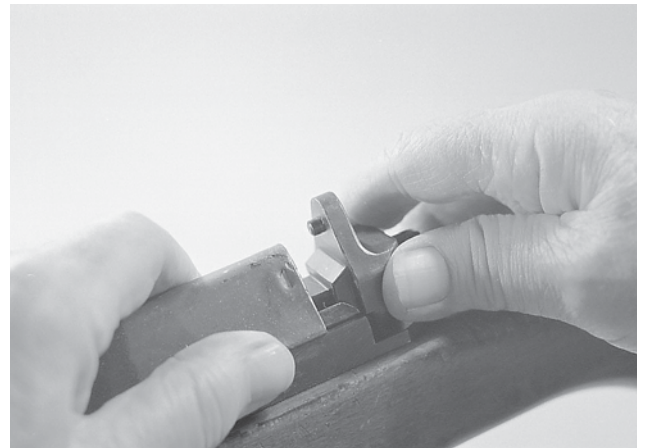
2. With the lock lever turned up to the rear, the catch can be pushed forward to release the magazine.



3. Set the manual safety lever to the center, halfway between its on-safe and off-safe positions.



4. Pull the receiver cover forward about 3/4 of an inch against the tension of the recoil spring, and hold it there. Lift out the receiver end piece.



- 5.** Ease the receiver cover and its recoil springs and guide off rearward. The springs and guide sleeve are easily removed.



- 6.** Use the cocking handle to move the bolt assembly to the rear, and then slide it out of the receiver.



- 7.** Move the breechblock slightly forward in the bolt carrier, and turn it to the left for removal.



- 8.** The firing pin and its return spring can be removed by drifting out this crosspin. Note that this pin is usually heavily riveted, and removal should be done only for repair.

- 9.** If it is necessary to remove the extractor, insert a small tool to lift the front of its spring just enough to clear its rear edge, and use a tool in the notch at the rear of the spring to slide it out toward the front. **CAUTION:** Control the spring. Except for repair, this system should be left in place.



- 10.** The safety and takedown mechanism in the receiver end piece should be disassembled only for repair purposes. If it is necessary, begin by taking out this screw.

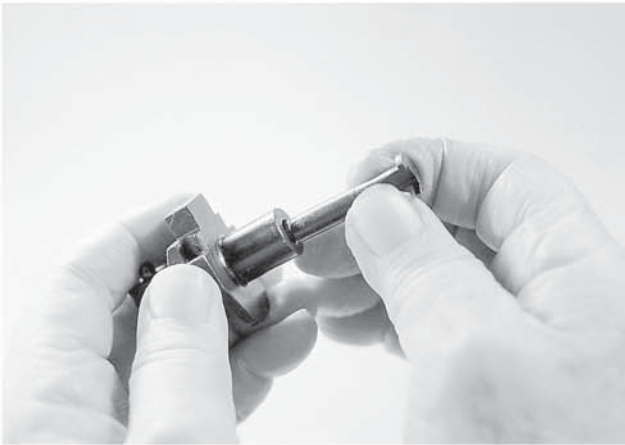


- 11.** After the screw is taken out, use a small tool to nudge the shaft retainer outward for removal.



- 12.** Insert a tool in the retainer hole to lever the shaft downward. After it has moved slightly, the safety lever can be taken out.

- 13.** Hold a finger or shop cloth over the hole to arrest the safety shaft plunger and spring, and remove the shaft downward.



- 14.** Insert a tool from below to nudge the safety shaft spring and plunger outward for removal. The small plunger disc may be released within the unit, and can be shaken out one of the openings. Take care that it is not lost.



- 15.** Before removing the action from the stock, you may wish to take off the folding bayonet. Place the blade between its two positions, and remove the pivot screw. Control the spring. The locking "handle" and spring are easily taken off the blade.



- 16.** Remove the cross-screw and the top screw from the front end cap of the stock, and slide the end cap toward the front.

- 17.** Tip the rear sight to its raised position for clearance. Lift the front of the handguard to clear the gas system base, and take off the handguard toward the front. Re-fold the rear sight to prevent its damage.



- 18.** Remove the three vertical screws in the trigger plate. Note that all three have washers, take care that those are not lost. For the center screw, the magazine catch must be pushed away during removal.



- 19.** Remove the action from the stock. The screw sleeves at each end will likely stay in the stock, but the center one will be released. Take care that it is not lost.

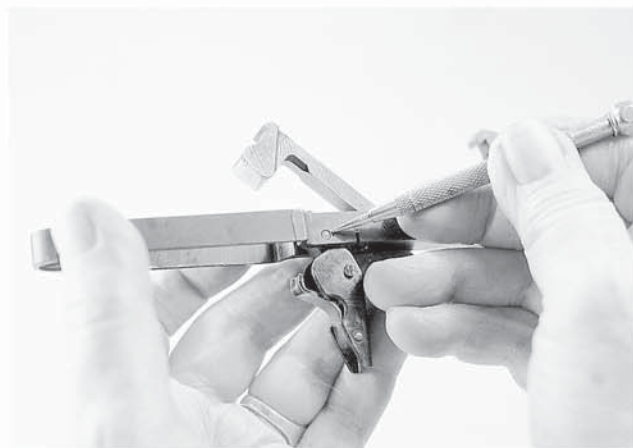


- 20.** Restrain the hammer, pull the trigger, and ease the hammer over to fired position. Take the trigger group out of the stock.

- 21.** Remove the hammer spring and its guide. The rear part of the guide will stay in the unit.



- 22.** Drifting out the crosspin will release the hammer for removal. Note that all of the pins in the trigger group are likely to be staked in place, and should be taken out only for repair purposes.



- 23.** Drifting out this crosspin will release the magazine catch and its spring. Control the spring. The lock-piece and its spring are mounted on the catch by full-riveted cross-pins, and these are not routinely removed.

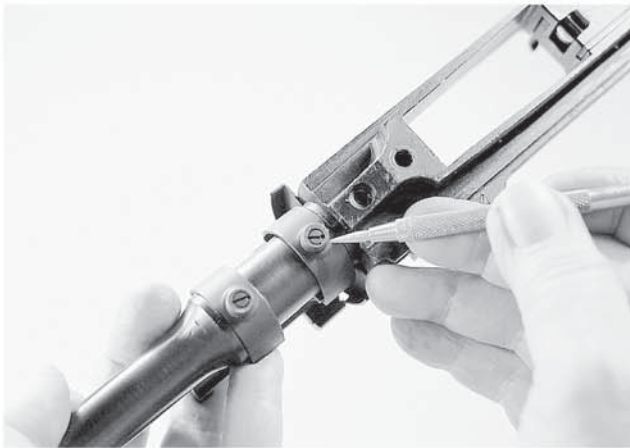


- 24.** This pin pivots and retains the trigger. If removal is necessary, the sear bar must be depressed, and the trigger is taken out to the rear and upward. Control the spring. The trigger/sear bar is full-riveted at the top of the trigger, and is not routinely removed.

- 25.** The sear crosspin is heavily riveted, and should not be routinely removed. If this is done, control the sear spring.



- 26.** This pin retains only the rear portion of the hammer spring guide.



- 27.** The rear sight unit is removable by taking out the two screws on its underside that retain the retaining clips. These are slid away from the sight base for removal.



- 28.** If the gas tube must be removed for repair, first loosen the lock nut. Then, use a wrench, of proper size, on the flats milled into the tube to unscrew it from the base, and take it out rearward. The base can be taken off by drifting out its riveted crosspin and pushing it forward, but in normal takedown it is best left in place.

- 29.** Drifting out this crosspin will release the disconnect lever and its spring, and the bolt hold-open and its spring. The pin should be drifted out in increments, to free them one at a time. Control the springs.



- 30.** This screw retains the bolt-locking block. You will note that it is heavily staked in place, and not routinely removed.



- 31.** The cocking handle is vertically mounted in its sliding bar, and is heavily staked. It is not routinely removed.



- 32.** If necessary for repair, the bayonet mount can be pushed off toward the front after its riveted crosspin is driven out. The front sight base can be removed in the same way, but only after the muzzle cap is taken off. The cap is held by a spring-plunger, which must be depressed and held so the cap can be unscrewed. **NOTE:** The cap has a left-hand thread, and must be turned clock-wise, front view, for removal.

Reassembly Tips:

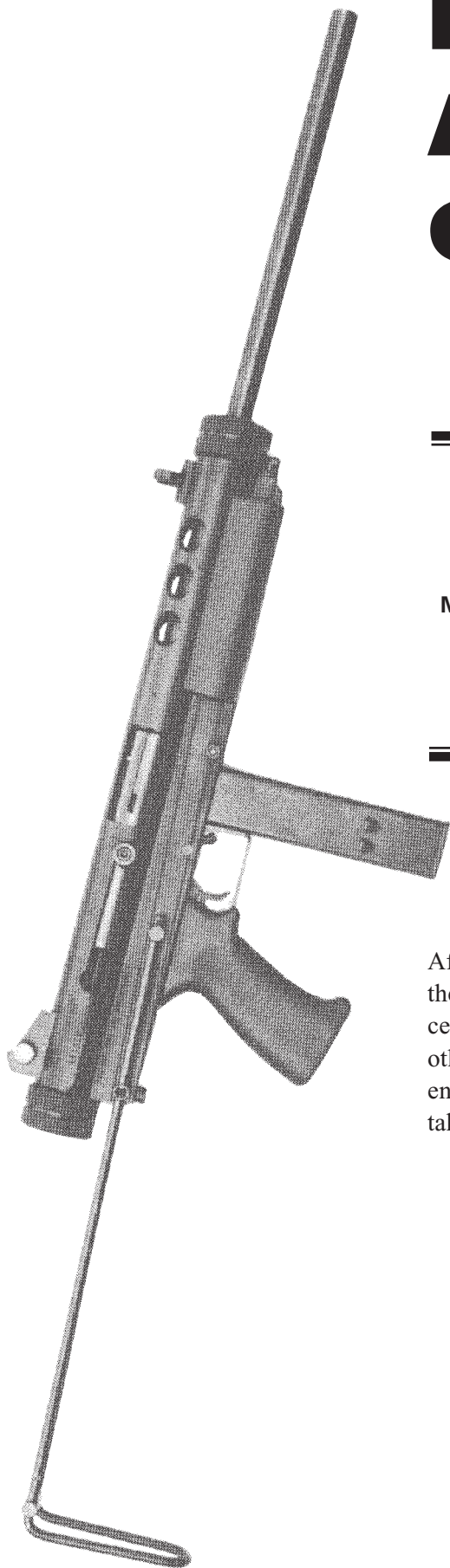
1. Before re-insertion into the receiver, the bolt and its carrier must be reassembled as shown.



2. If the safety system in the end-piece has been disassembled, be sure that re-assembly leaves the open space on the shaft at the front, with the safety lever in off-safe position. Remember to center the lever before the unit is re-inserted.



Feather AT-9 Carbine



Data: Feather AT-9 Carbine

Origin: United States

Manufacturers: Feather Industries
Boulder, Colorado

Cartridge: 9mm Parabellum

Magazine capacity: 25 rounds

Overall length: 35 inches (stock extended)
26-1/2 inches (stock retracted)

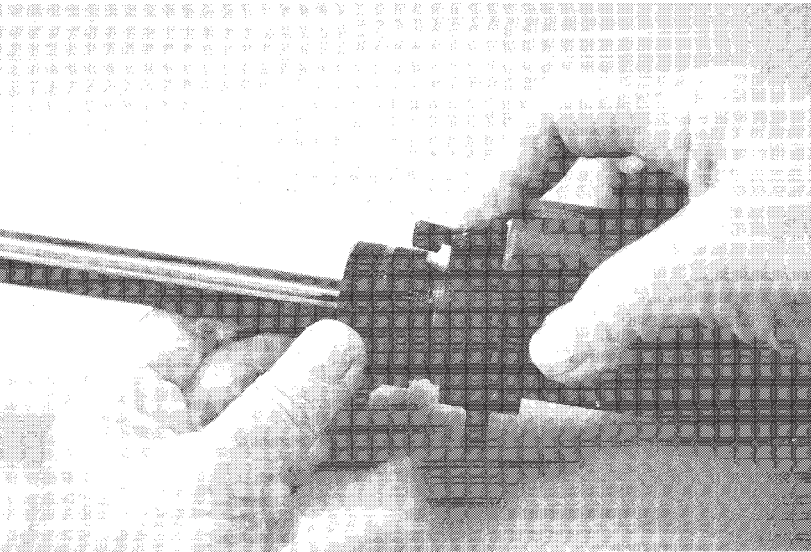
Barrel length: 17 inches

Weight: 5 pounds

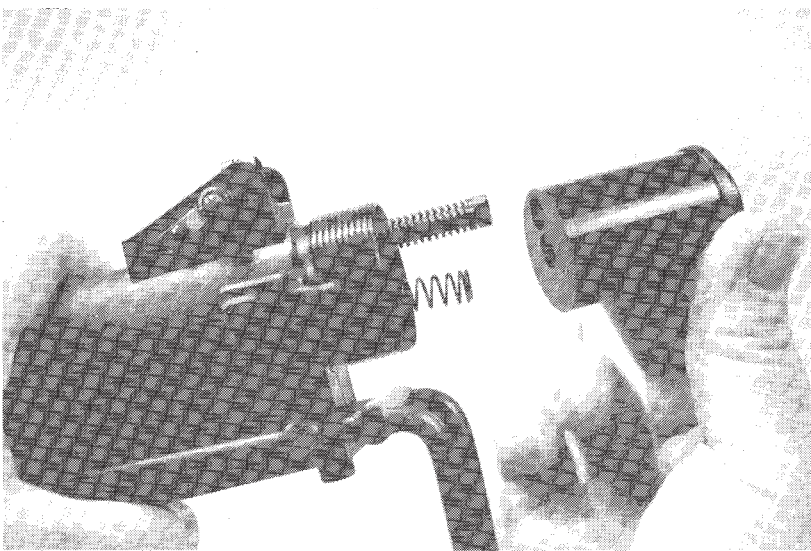
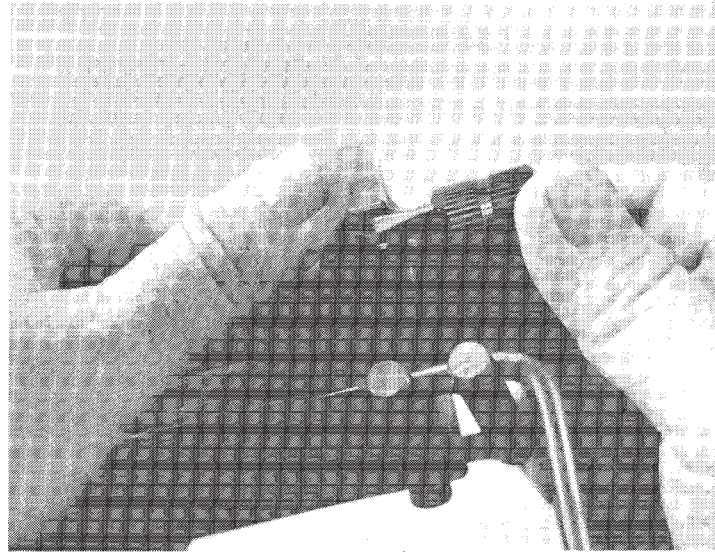
After the success of their AT-22 in 22 LR, introduced in 1986, the Feather company in 1990 began manufacture of a scaled-up centerfire version in 9mm, the AT-9. While the bolt and some other parts are quite different in the AT-9, the basic design has enough similarities that the instructions may be helpful in the takedown and reassembly of the rimfire AT-22.

Disassembly:

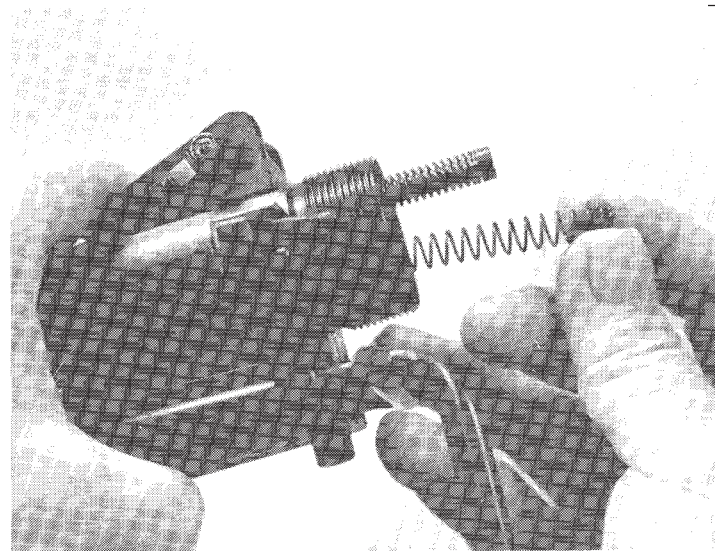
1. Remove the magazine. Depress and hold the barrel retaining collar lock. Unscrew the collar, and remove the barrel toward the front.



2. With the striker in the fired position, depress the receiver end cap laock and hold it while the end cap is unscrewed and taken off. Control the bolt spring tension as the cap clears.



3. Remove the receiver end piece, or buffer, toward the rear.

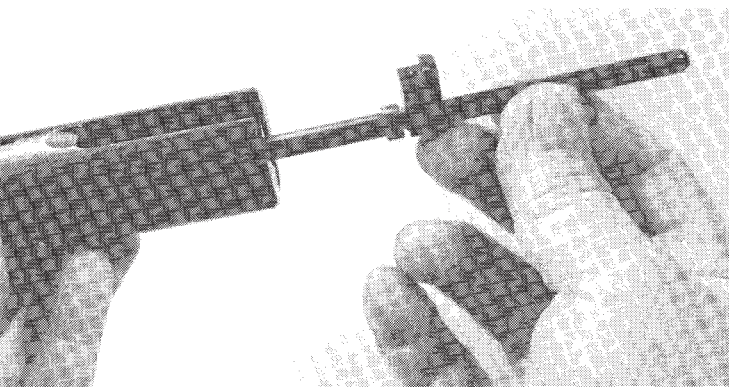
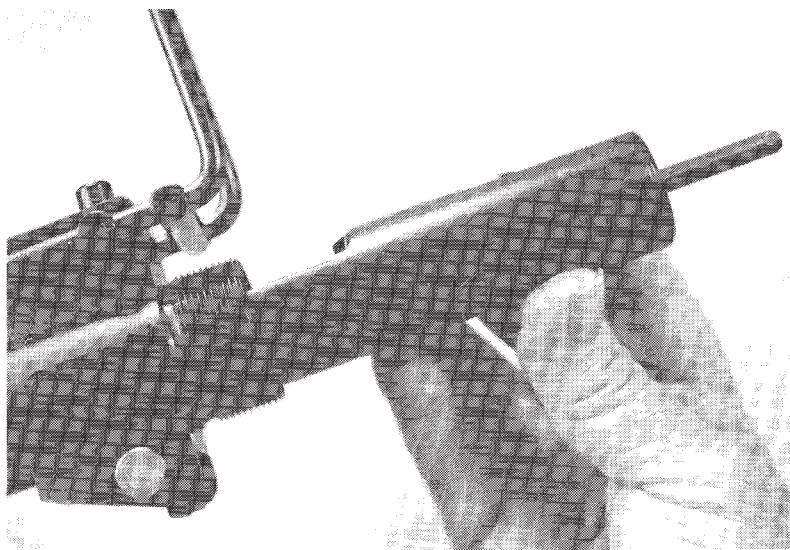


4. Remove the striker spring and the captive recoil spring assembly toward the rear.

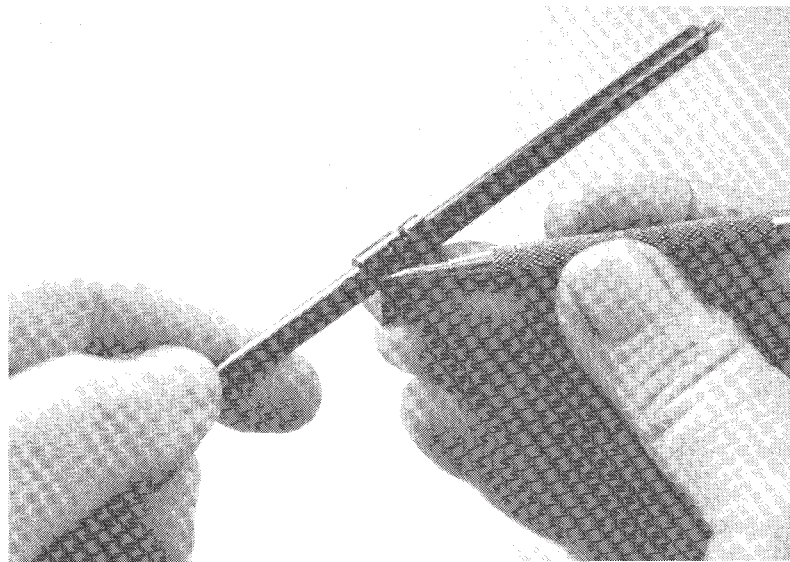
- 5.** Move the bolt toward the rear until the bolt handle aligns with the exit opening, and take off the bolt handle toward the right.



- 6.** Remove the bolt toward the rear.

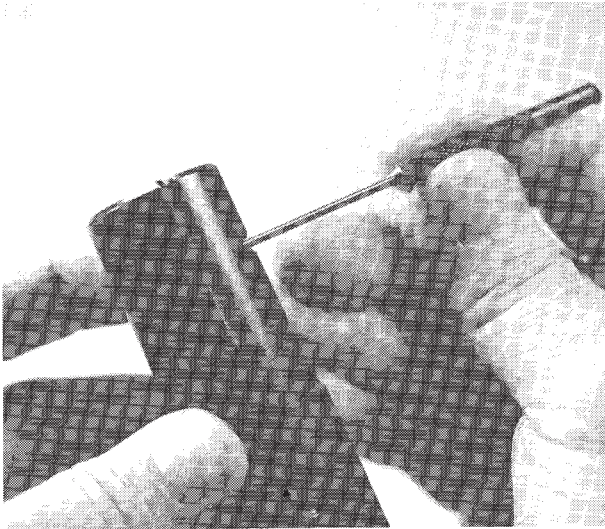


- 7.** Remove the striker assembly from the bolt.

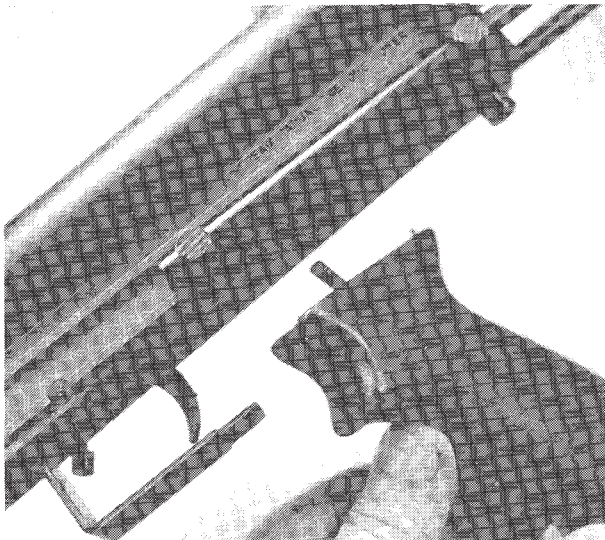
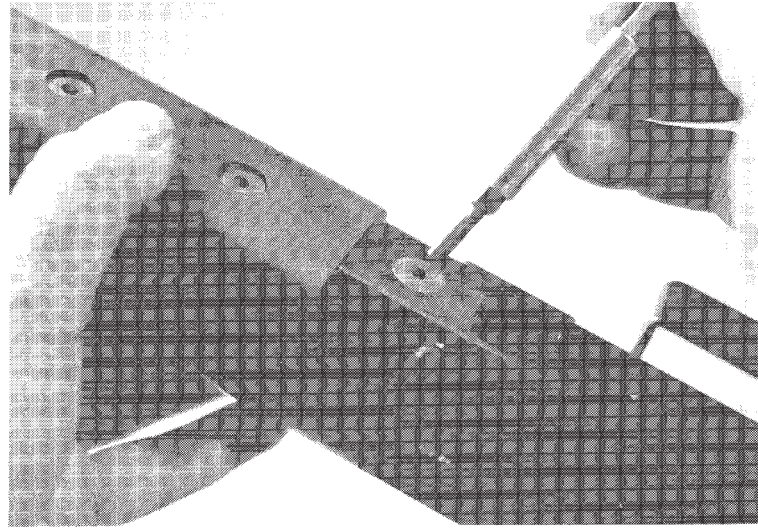


- 8.** If broken parts are to be replaced, the striker assembly can be taken apart by drifting out the two small vertical roll pins. If this is done, note that there will be five parts: the striker (firing pin), rebound collar, rebound spring, sear lug, and spring guide. Note the relationship of the parts before disassembly.

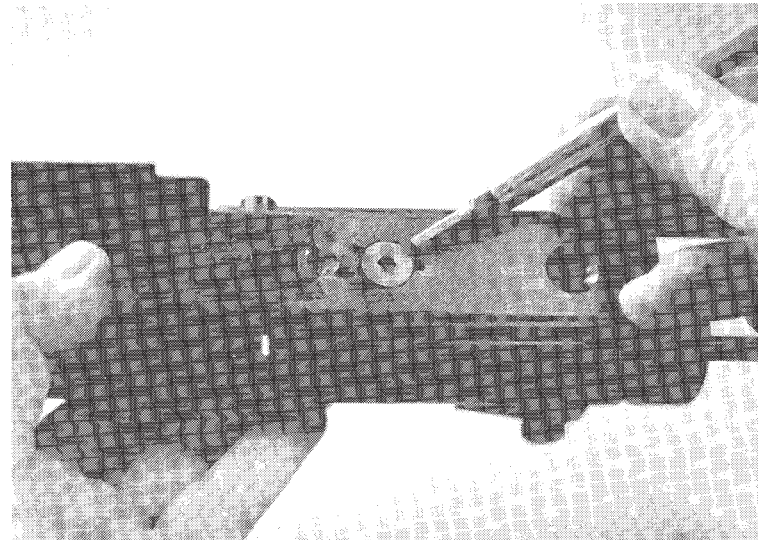
- 9.** The extractor and its transverse coil spring are retained on the right side of the bolt by a vertical roll pin. Be sure a roll pin punch is used.



- 10.** With an Allen wrench of the proper size, remove the large screw at the front of the lower receiver. Note that all of these screws were installed with a thread-locking sealant, and removal may be difficult. Remove the other screw, at the rear.

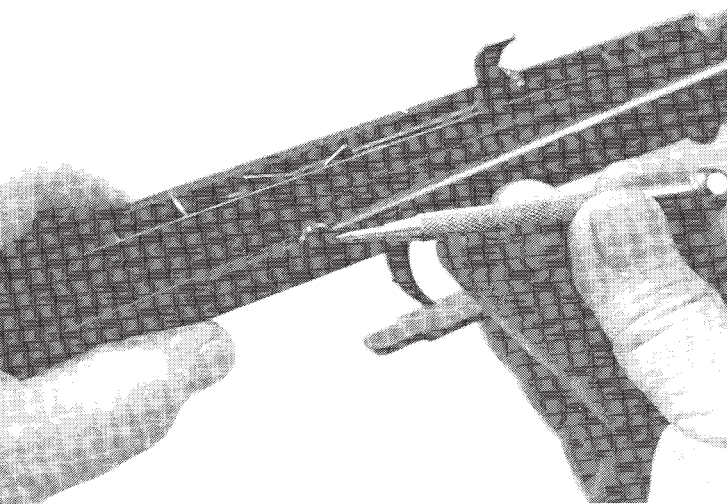


- 11.** Remove the Allen screw inside the pistol grip. Take off the grip rearward and downward, taking care that the trigger spring, plunger, and bushing at its upper front are not lost.



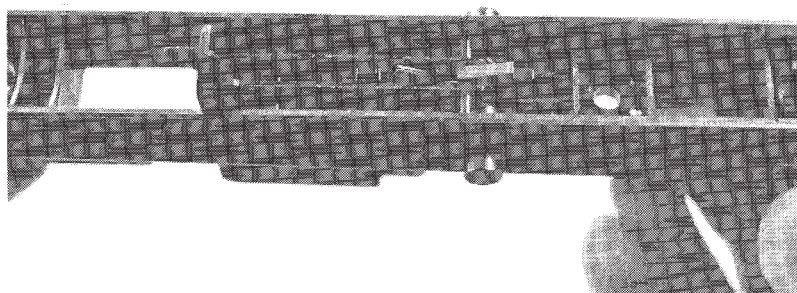
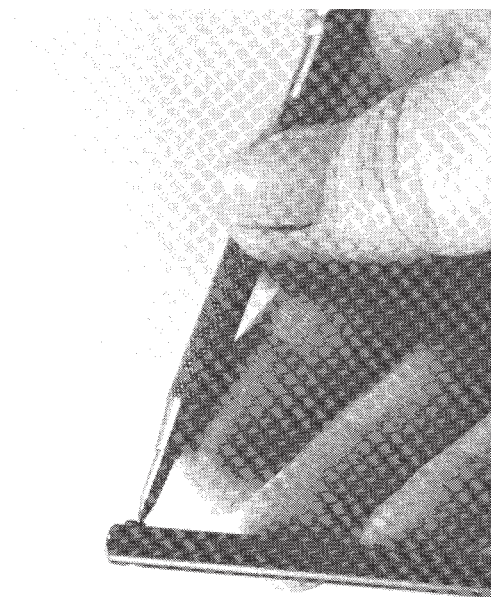
- 12.** Removal of the grip will give access to the third lower receiver screw, and it can now be taken out.

- 13.** Extend the buttstock, and remove the lower receiver downward.



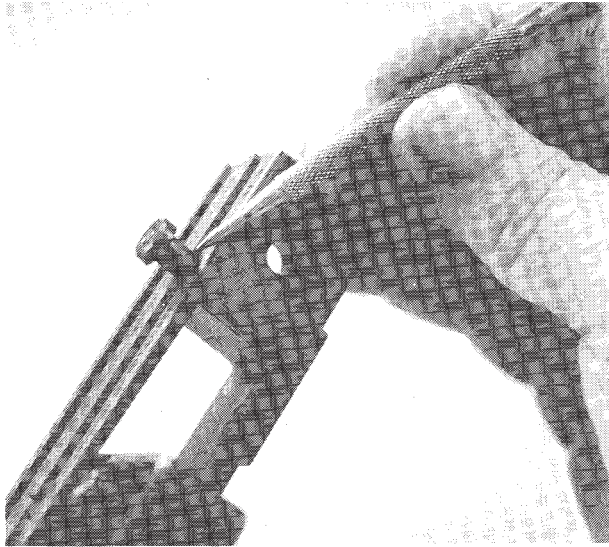
- 15.** After the buttstock has been removed (it is still in place here), the forward stock crosspiece is pushed out to free the trigger group for removal upward.

- 14.** To discourage illegal alterations, most 9mm guns of this type are designed so that takedown of the firing systems are relatively difficult. If disassembly is absolutely necessary, begin by drifting out the stop roll pin at the tip of the right stock arm. This pin is staked in place, and removal will likely require a new pin.

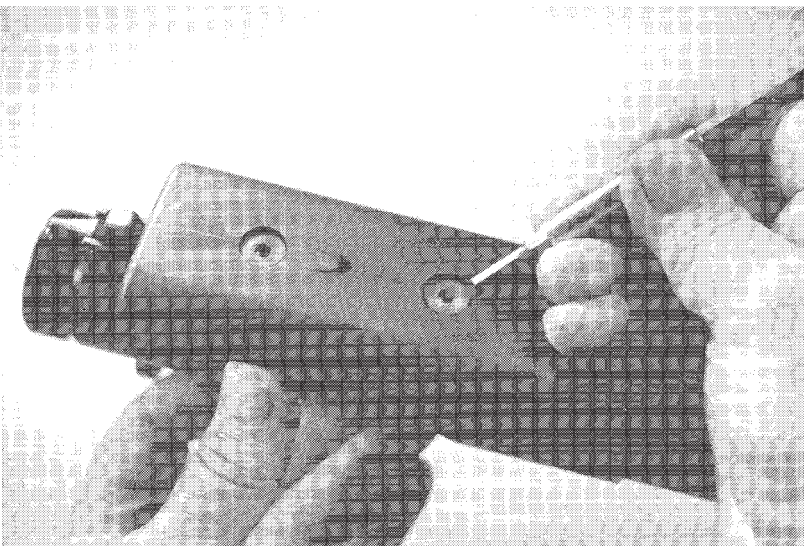
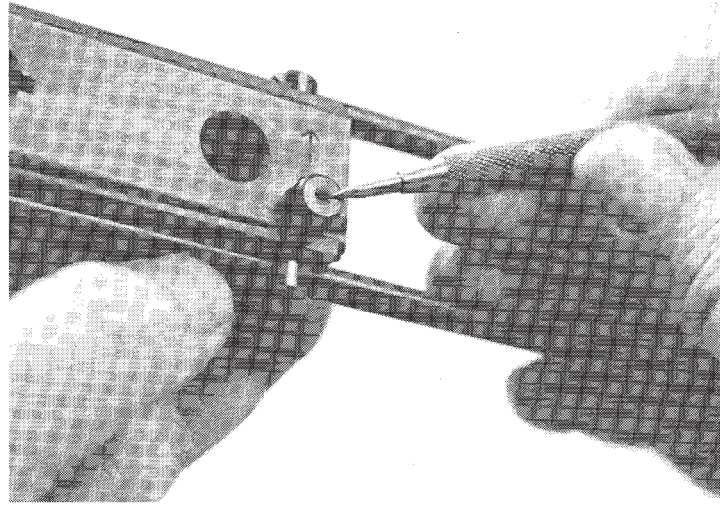


- 16.** Shown here is the top of the trigger group, with all parts and springs in their proper positions. This is for reference if the unit is removed and disassembled. At the center, from the left, are the trigger, disconnect, and sear. Removal of the trigger group will also expose the safety, and it is taken out by drifting its roll pin handle out downward, then pushing the cross piece toward either side.

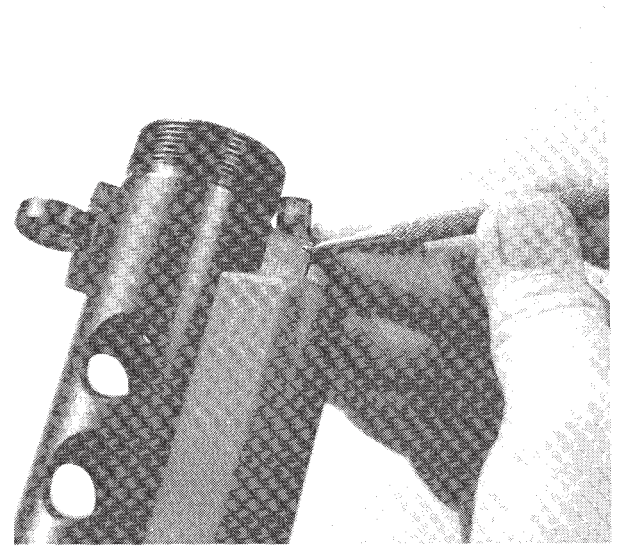
- 17.** The magazine catch button is retained on the cross shaft by a vertical roll pin. After this is drifted out, the button is taken off toward the right, along with the spring, and the catch is taken off toward the left.



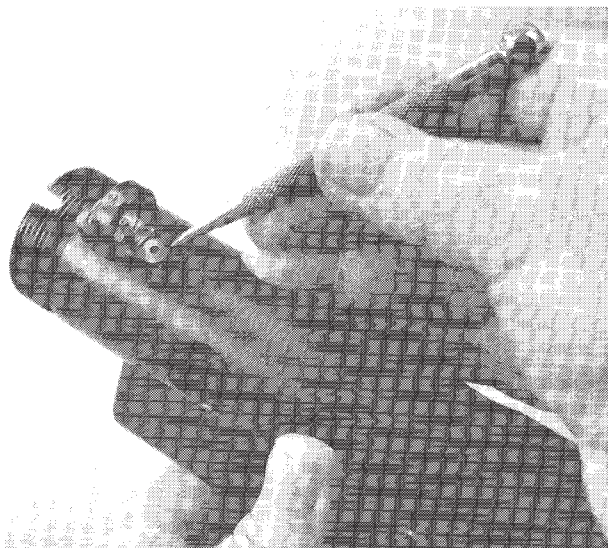
- 18.** The shaft of the buttstock latch is a roll pin, and this is drifted out downward, from inside. The rear stock cross piece can then be taken out toward either side. (Note: In this photo, the stock is in place. The latch and cross piece can be taken off only after the stock is removed.)



- 19.** The forend is retained by two vertical Allen screws.

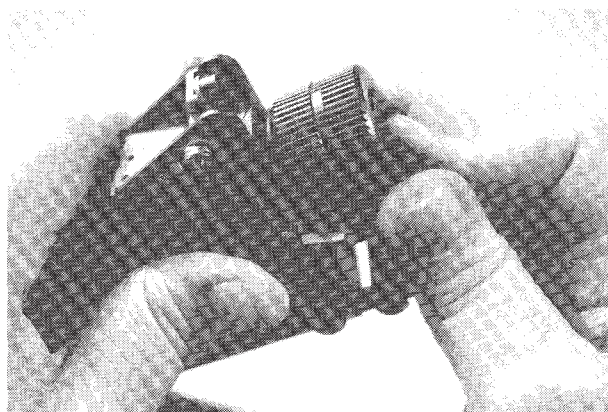


- 20.** The latches for the barrel collar and the end cap are pivoted and retained by small roll pins, and are powered by small springs.

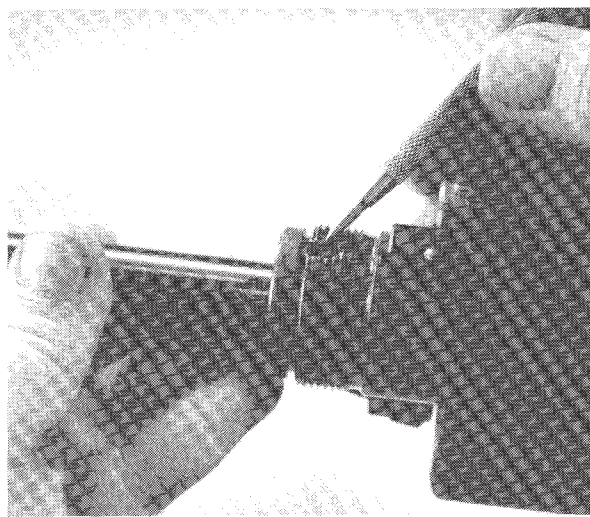


- 21.** The front and rear sights are retained by two small Allen screws (in each sight). For access to the rear screw in the rear sight, the aperture piece must be removed. Further disassembly of the rear sight is not recommended.

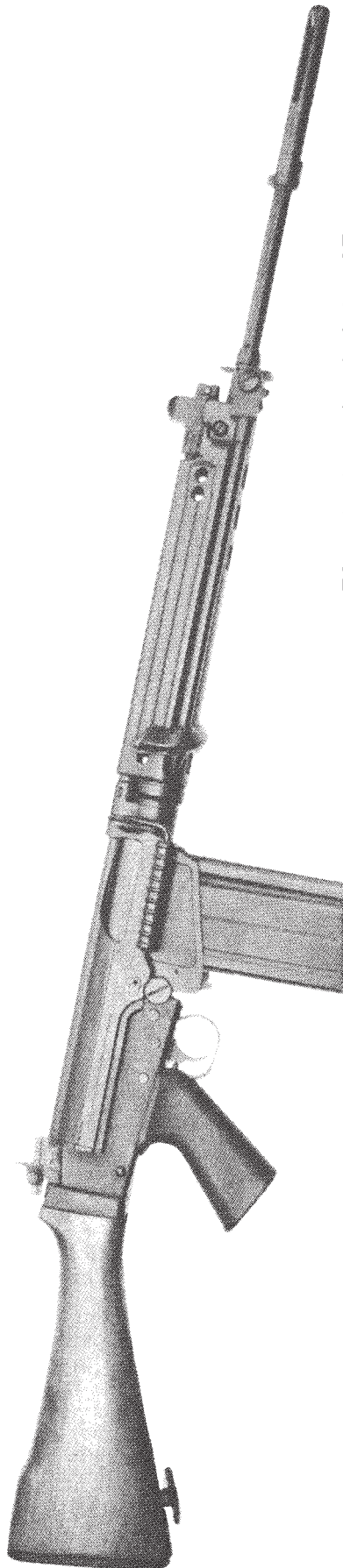
Reassembly Tips:



- 1.** When reinstalling the receiver end cap, keep inward pressure on the buffer end piece, and keep the latch depressed as the cap is screwed into place.



- 2.** When reinstalling the barrel, be sure the locator stud on top enters its mating cut in the receiver.



FN-FAL

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the FN-FAL also apply to the following guns:

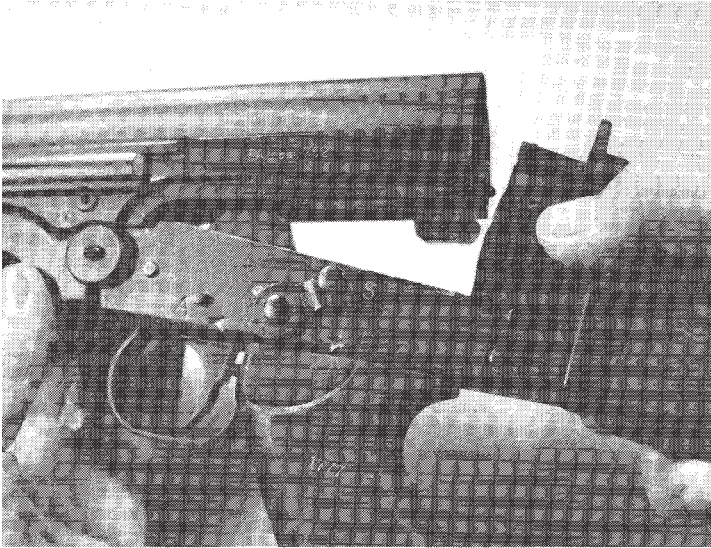
Austrian StG 58	British L1A1
DSA SA 58	German G1
Springfield Armory SAR 48	Springfield Armory SAR 4800
Springfield Armory SAR 48 Bush Rifle	Springfield Armory SAR Para Model

Data:	FN/FAL
Origin:	Belgium
Manufacturer:	Fabrique Nationale, Herstal (Liege)
Cartridges:	7.62mm NATO (.308 Win.)
Magazine capacity:	20 rounds
Overall length:	41-1/2 inches
Barrel length:	21 inches
Weight:	9 pounds 8 ounces

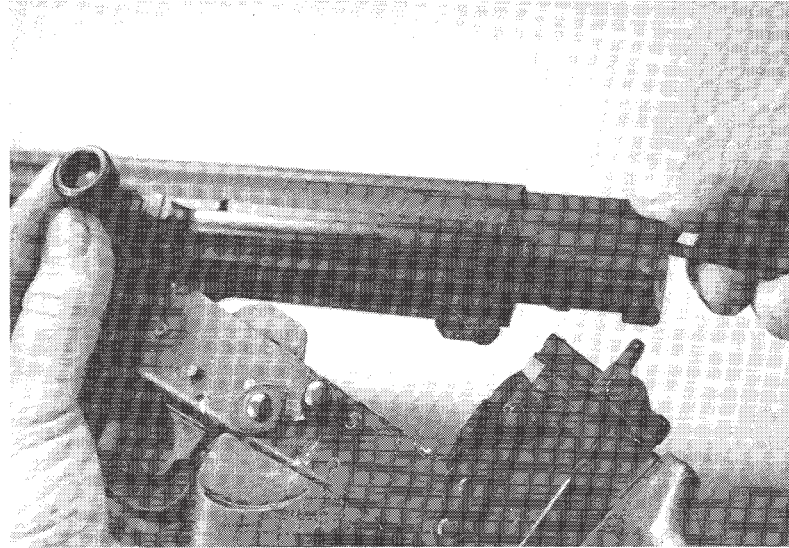
Some elements of the FN Model 1949 were used in the design of Fusil Automatique Leger (FAL), but it is a true assault rifle in modern sense. It was first made around 1950, and by the middle of that decade it was the standard military rifle of so many countries that a list would fill too much space here. Among these countries, there are some small differences in various features, nothing that would cause difficulty in takedown. This gun has been marketed in the U.S. by Springfield Armory of Geneseo, Illinois, in a number of civilian-legal styles. They are essentially exact copies of the original FAL in semi-automatic only, and these instructions apply to all. The gun shown here is an original Belgian version.

Disassembly:

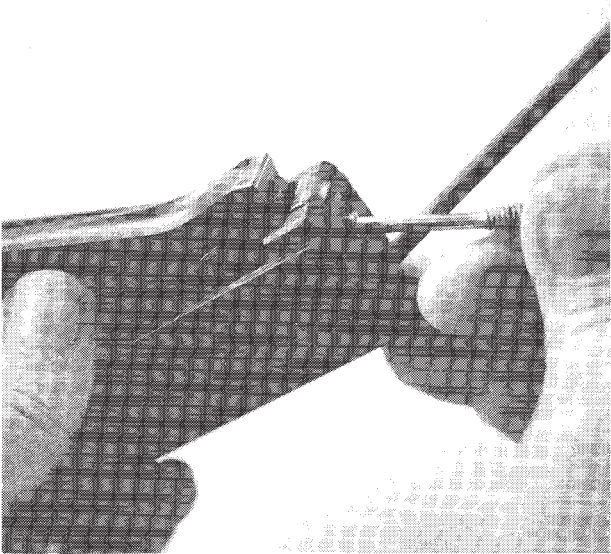
1. Remove the magazine, and cycle the action to cock the hammer. Move the latch lever toward the rear and tip the barrel and upper receiver upward at the rear.



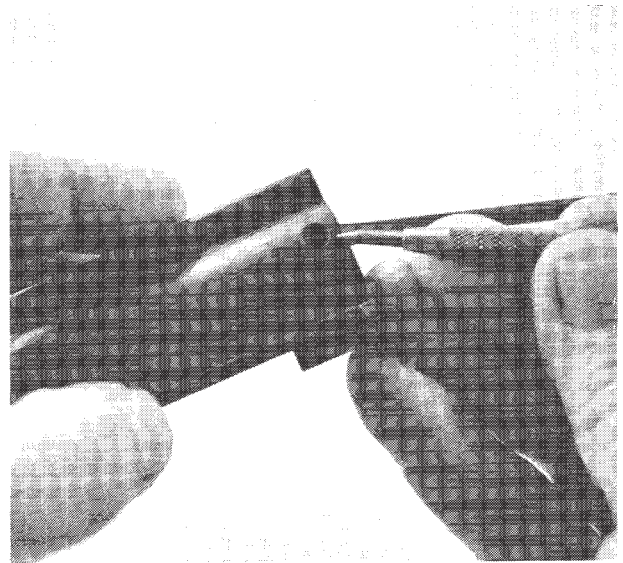
2. Grasp the spring rod at the rear of the bolt carrier and remove the bolt and carrier assembly toward the rear.



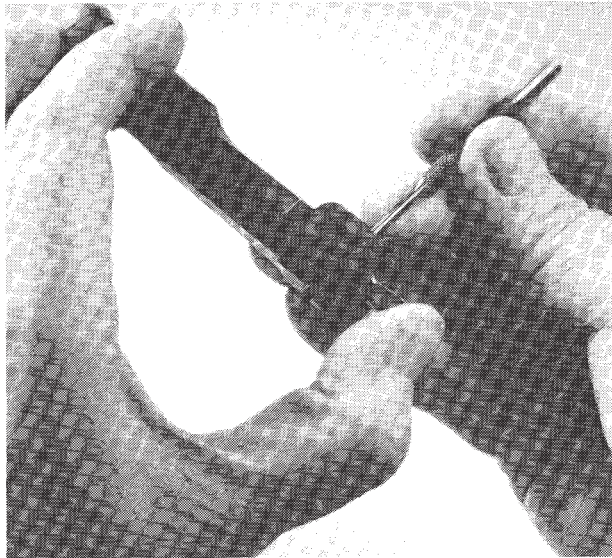
3. Move the bolt to the rear of the carrier and lift it at the front. Use a tool to depress the firing pin head, and remove the bolt from the carrier.



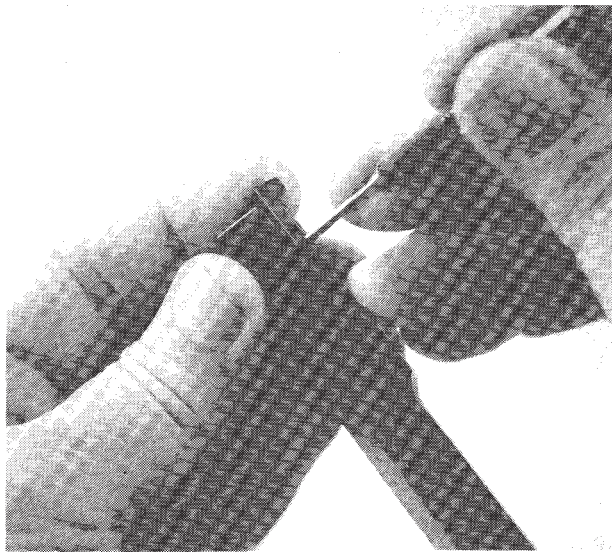
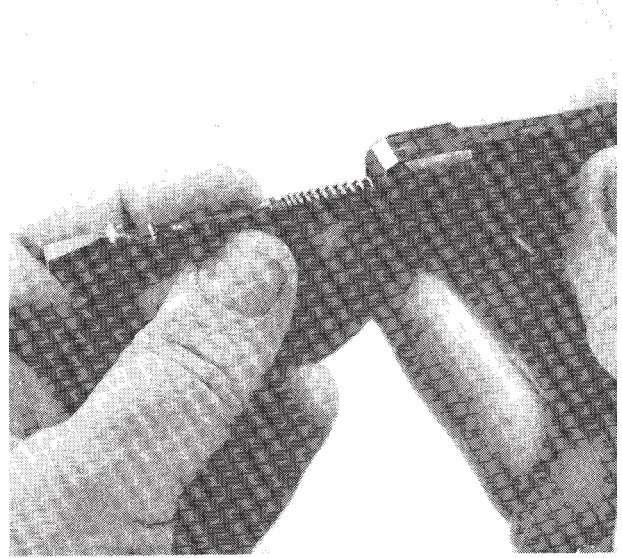
4. The bolt spring rod and its positioning spring can be removed by drifting out its cross pin toward the right. This pin is riveted on the left side, and in normal takedown it is best left in place.



- 5.** Restrain the firing pin, and push out the retaining cross pin toward the left. The return spring is powerful, so control the firing pin.



- 6.** Remove the firing pin and its return spring toward the rear.

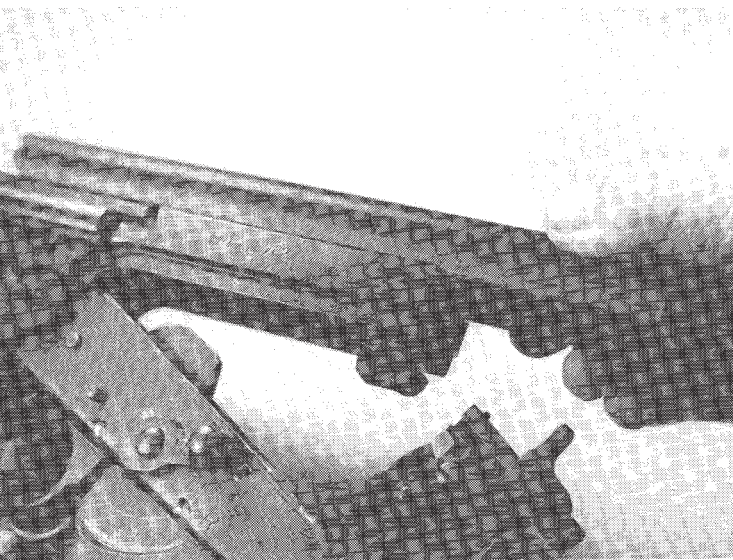


- 7.** Insert a drift punch into the hole in the extractor plunger, and draw the plunger rearward until the extractor can be tipped out toward the front. Again, this is a very strong spring, so control it.

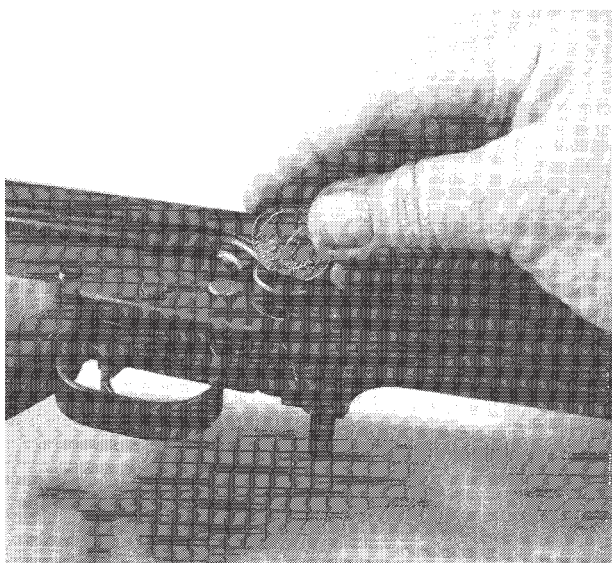
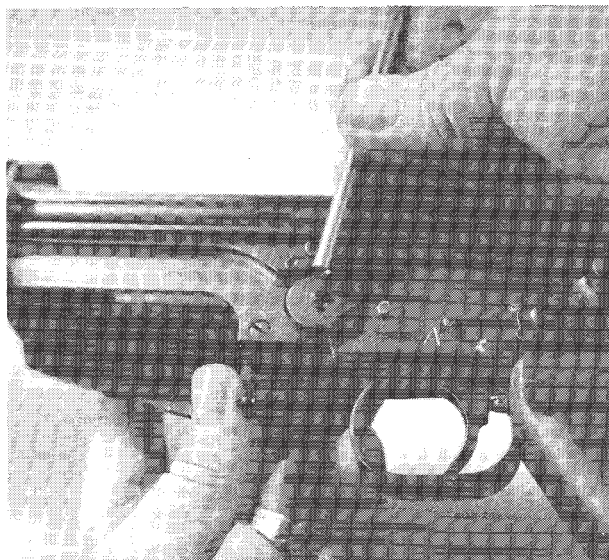


- 8.** After the extractor is removed, ease the plunger and spring forward and take them out.

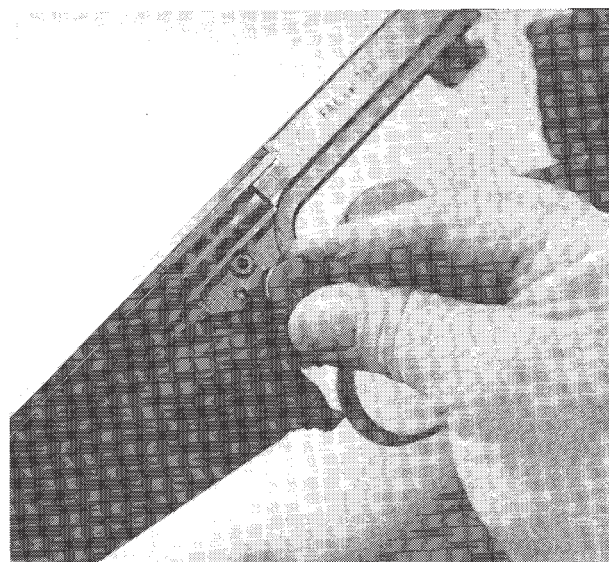
- 9.** Slide the cover rearward off the receiver.



- 10.** A tool with a hollow end is used to compress the locking split-end of the hinge cross screw, and push it level with the side.

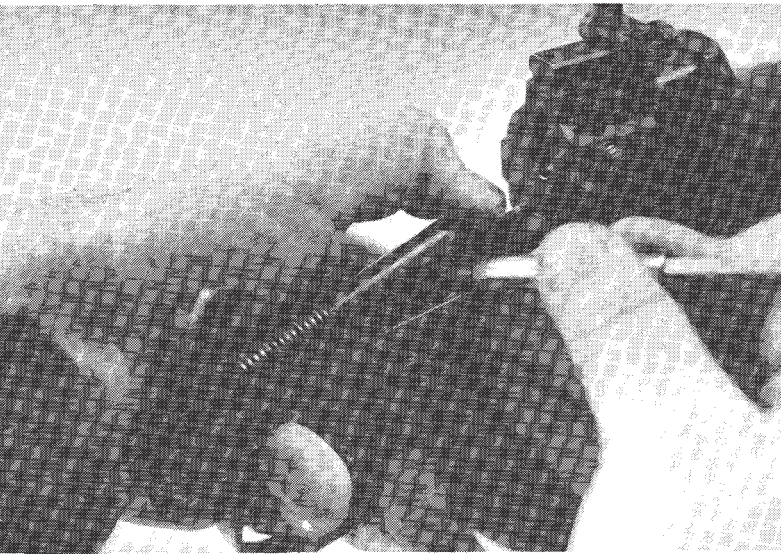


- 11.** After the tip is unlocked, use a coin to unscrew the hinge cross screw on the right side.

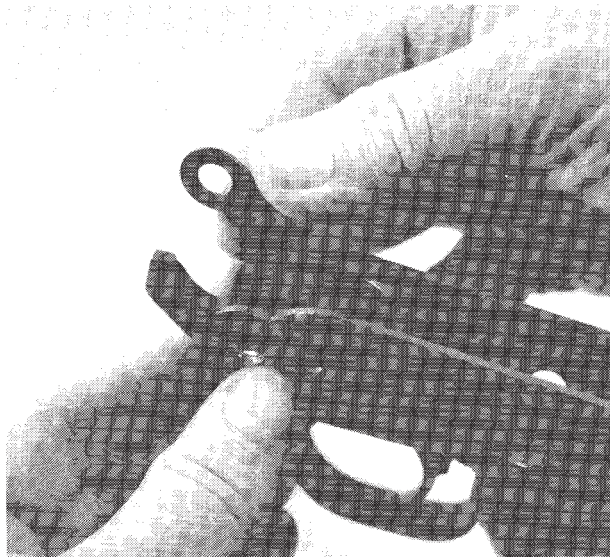
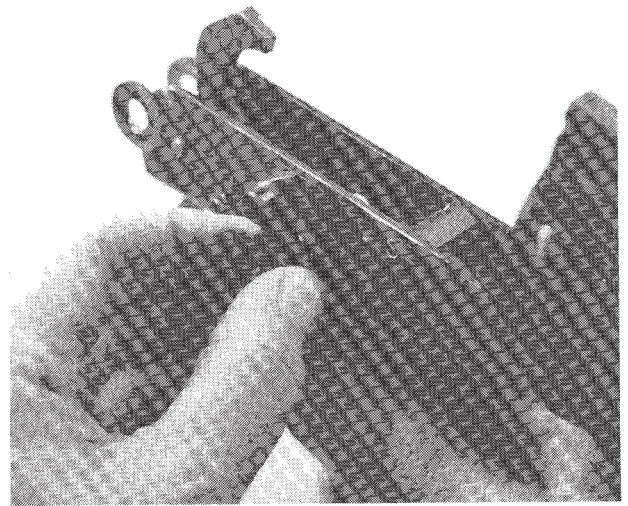


- 12.** After the cross screw is removed, push out the hinge-piece toward the left, and separate the barrel and upper receiver from the action and buttstock unit.

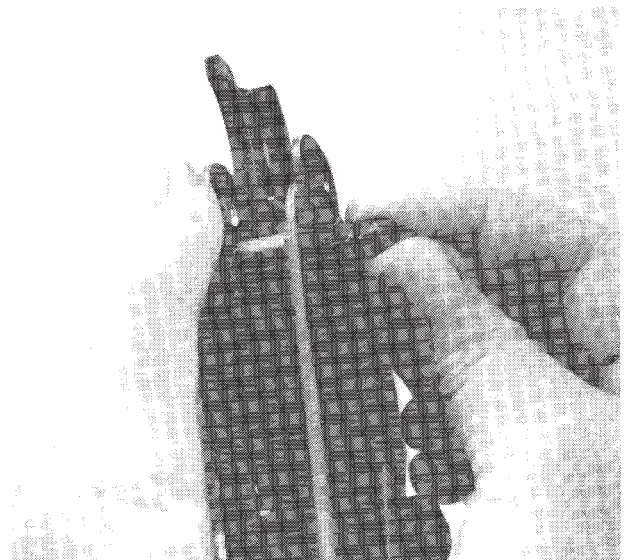
- 13.** Ease the hammer down to fired position, and pry the hammer spring housing upward at the rear, as shown. **Caution:** *Keep the housing and spring under control.*



- 14.** Turn the safety-lever up past the on-safe position to vertical, and remove it toward the left.

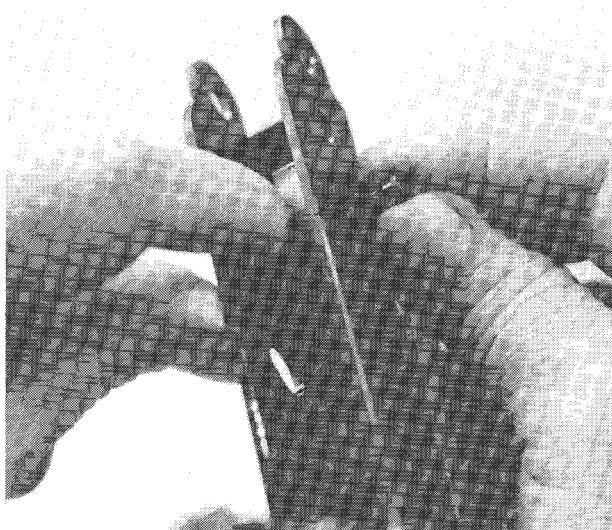


- 15.** Inside the action on the right side is the pin lock-plate. Turn it over toward the front, and in the position shown, it can be taken out upward.

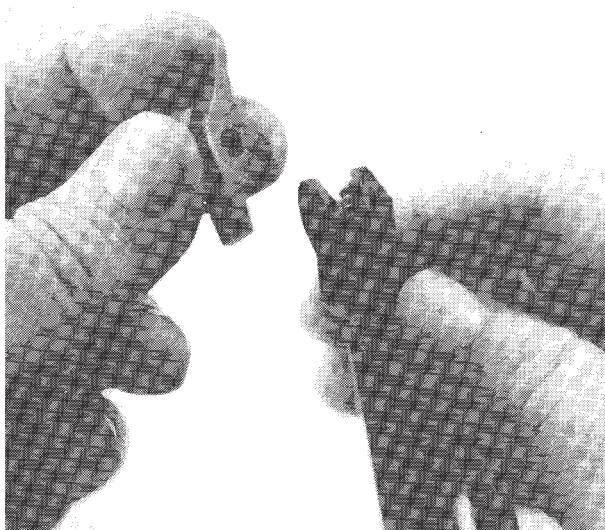


- 16.** Depress the trigger, push out the hammer pivot toward the right, and remove the hammer.

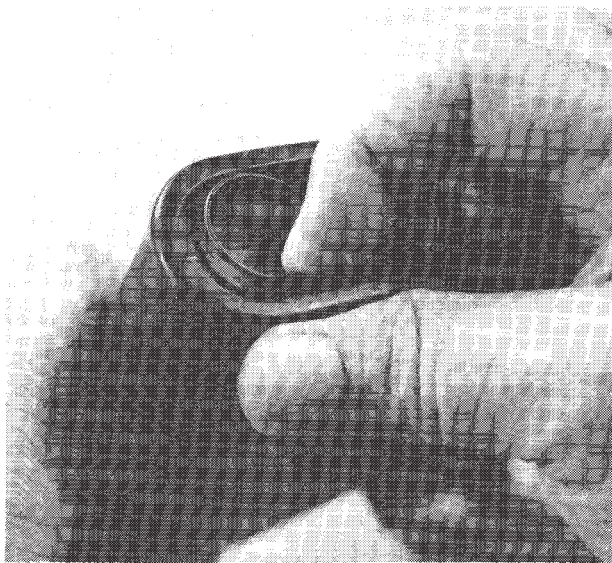
- 17.** Restrain the sear on the inside, and push out the trigger cross pin toward the right.



- 18.** Remove the trigger and sear assembly upward. The sear and the sear plunger and spring are free for removal from the trigger.



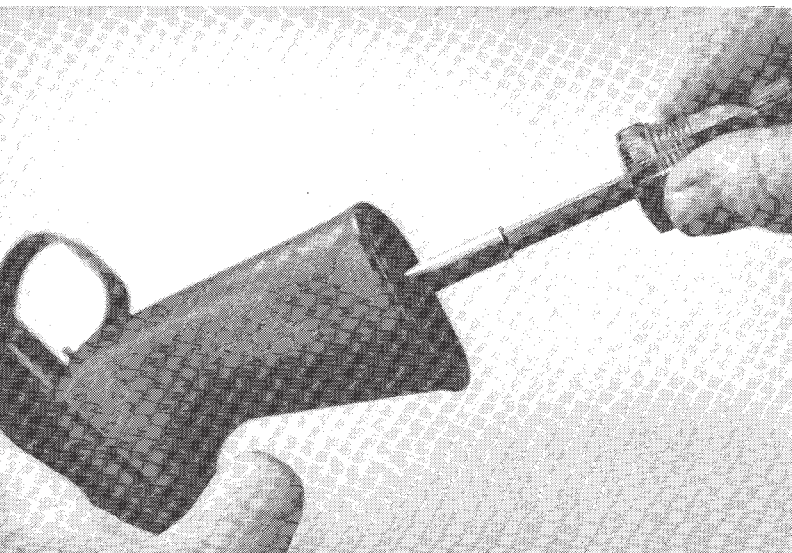
- 19.** Spring the wire latch out of its locking recess in the pistol grip, and turn it outward.



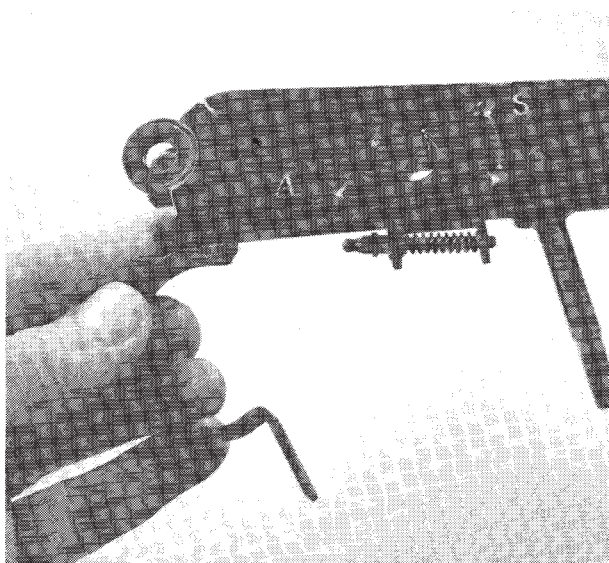
- 20.** Remove the combination oiler and cleaning kit from the pistol grip.



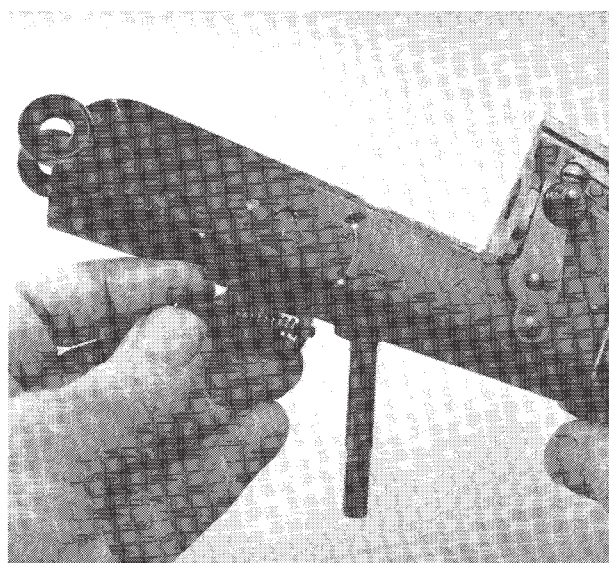
- 21.** Use a large screwdriver with a wide blade to unscrew the retaining nut inside the pistol grip.



- 22.** Remove the pistol grip downward.

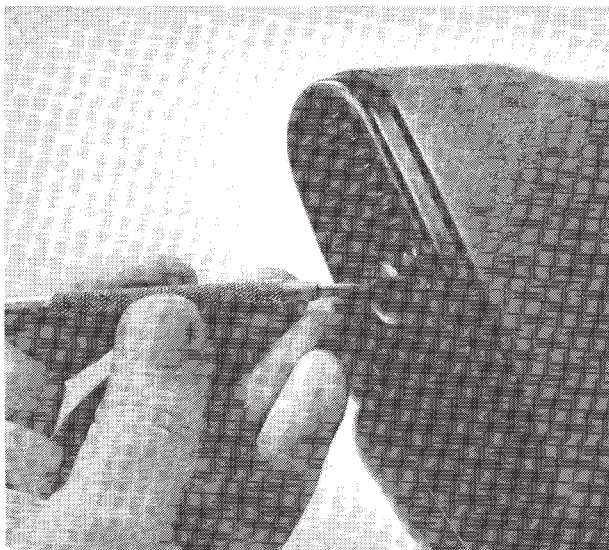


- 23.** Turn the trigger guard forward to the position shown, and take it off downward.

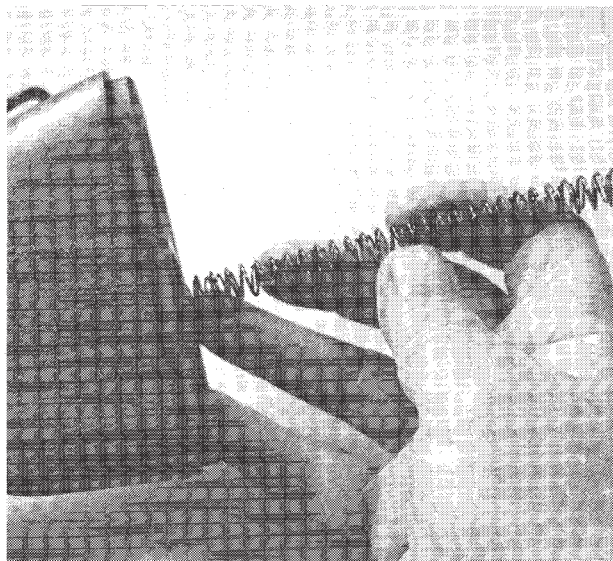
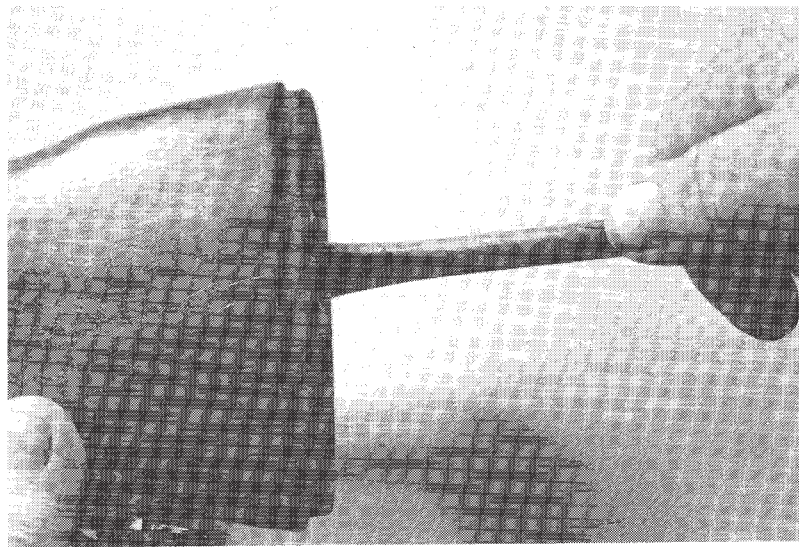


- 24.** To remove the trigger spring and its plunger, tip the plunger downward out of its slot in the mount.

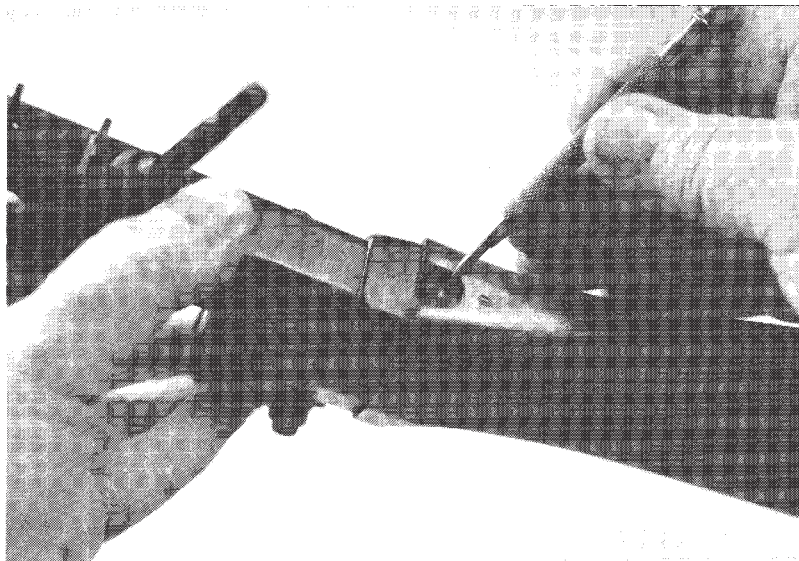
- 25.** Use a screwdriver with a wide, thin blade to remove the buttplate screw, and take off the buttplate. Take care that the lock washer on the screw isn't lost.



- 26.** Use a large screwdriver with a wide blade to remove the buttstock retaining nut. **Caution:** As the nut clears its threads, the bolt spring will be released, and it is powerful. Control it.

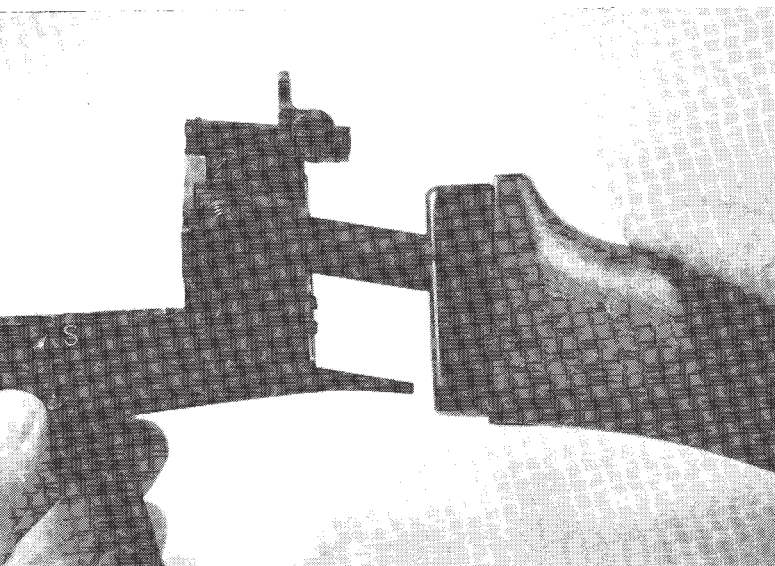


- 27.** Remove the concentric recoil springs and the follower toward the rear.

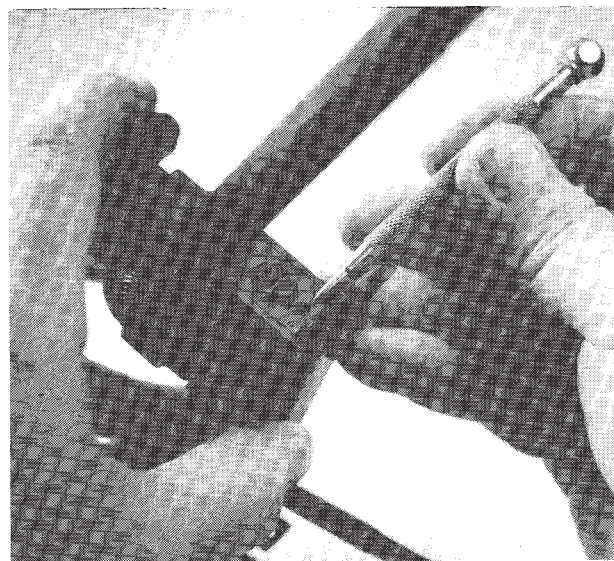
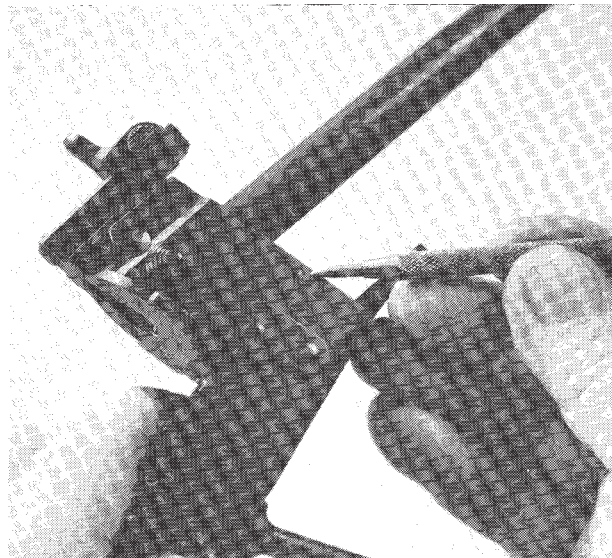


- 28.** Remove the retaining screw on the underside at the forward edge of the stock.

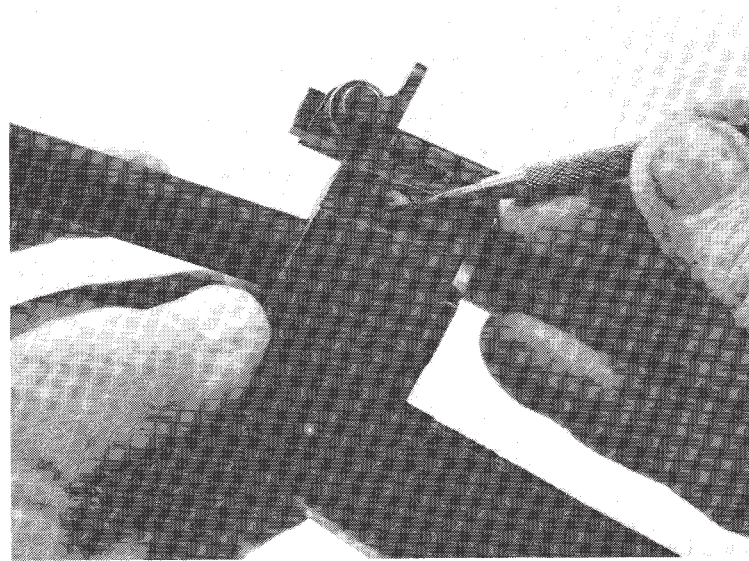
- 29.** Take off the buttstock toward the rear.



- 30.** If removal of the receiver latch is necessary, drift out this cross pin. **Caution:** *The spring will be released rearward. Ease out the spring.*

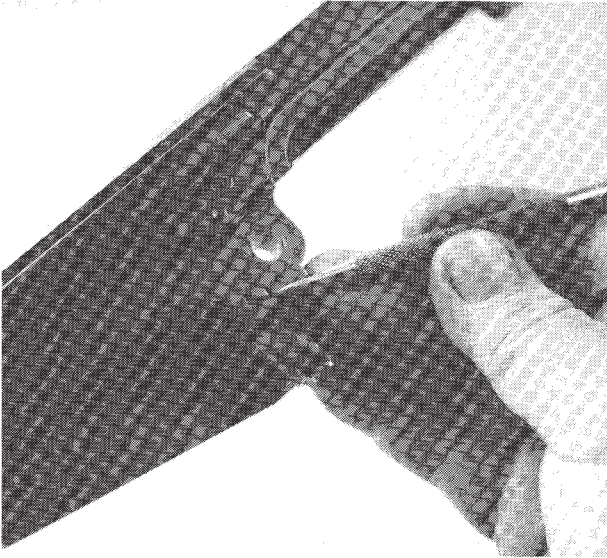


- 31.** Removal of this small screw will allow the latch lever to be taken off toward the left, and the latch bolt can then be taken out rearward.

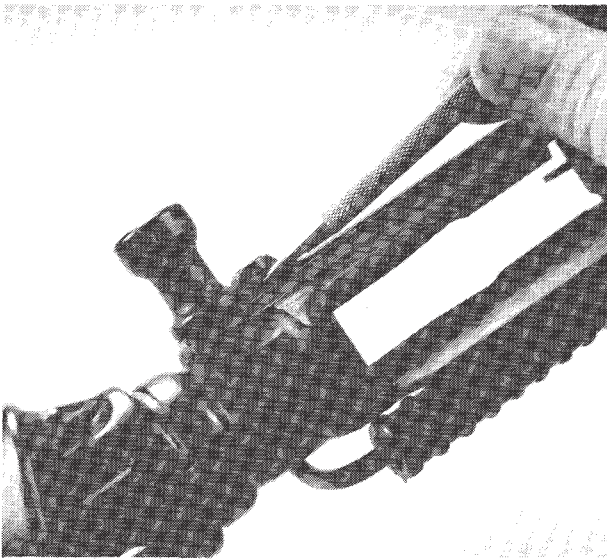
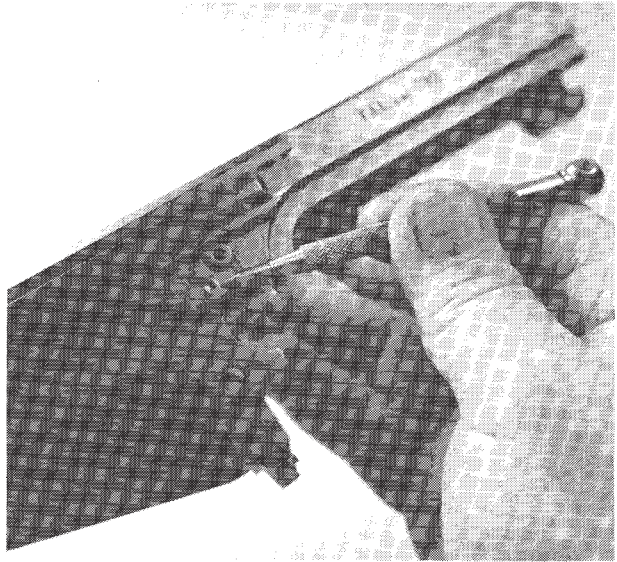


- 32.** The rear sight can be removed by backing out the adjustment screws on each side.

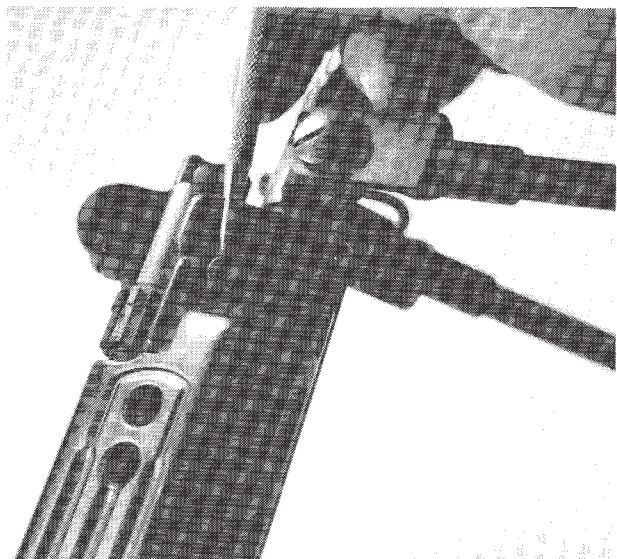
- 33.** The magazine catch and the bolt hold-open, and their attendant springs, can be removed by taking out a single cross screw. Note that this screw is usually staked in place, and it should be removed only for repair purposes.



- 34.** The ejector is retained by a cross pin which is heavily riveted on both sides, and again, removal should be only for repair.

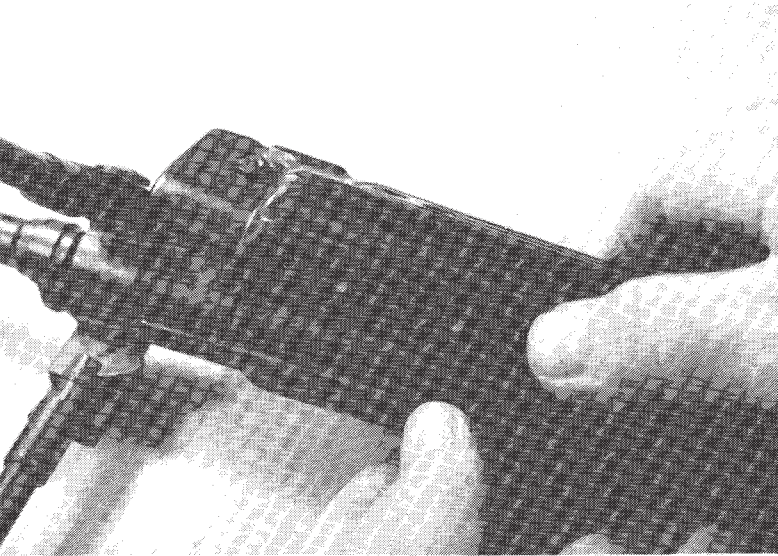


- 35.** A small vertical pin retains the stop piece in the cocking handle assembly. After removal of the pin, the stop piece can be pushed out toward the left, and the cocking handle slide can be moved out of its track toward the rear. When this unit is out, another small vertical pin can be drifted out to free the handle and its spring and plunger.

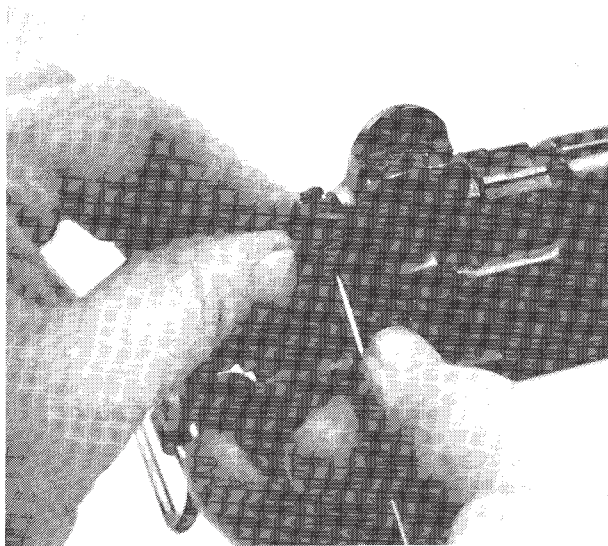
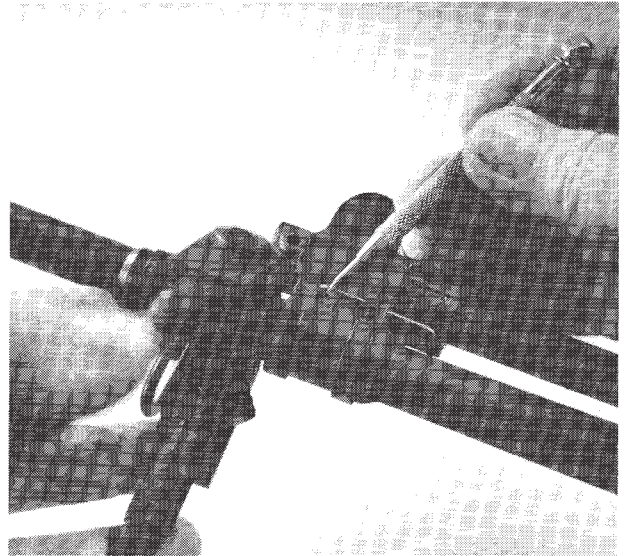


- 36.** A cross screw on the right side retains the forend plates. Removal of the large screws on each side of the bipod will allow the bipod to be taken off, but in normal takedown this unit is best left in place.

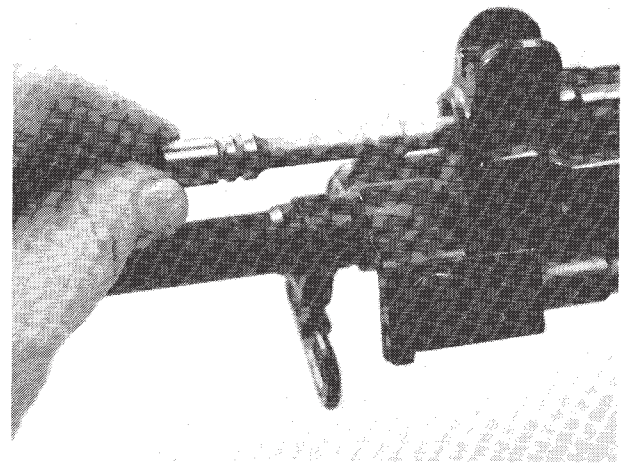
- 37.** Tip the forend plates outward, then remove them toward the front. The cross screw is captive in the right plate.



- 38.** If the flash hider, sling swivel, and bipod have been removed, and the gas piston assembly is to be removed for repair, it is retained by this cross pin.



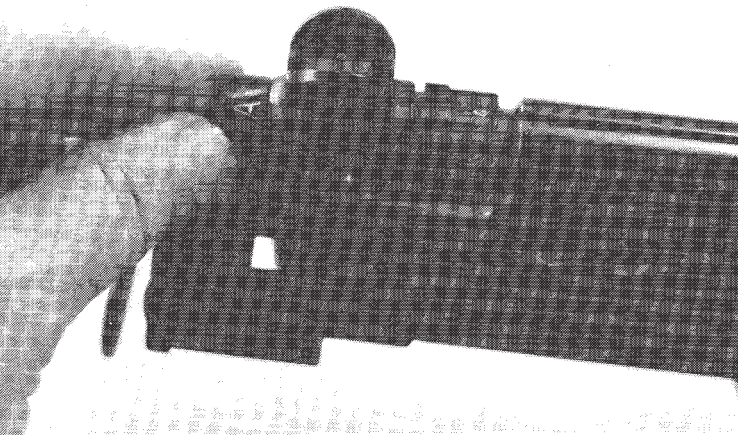
- 39.** For access to the gas system, use a bullet tip or a tool to depress the latch button, and turn the gas cylinder plug clockwise, front view, about a quarter turn. When it is clear, the piston spring will push it out, so control it.



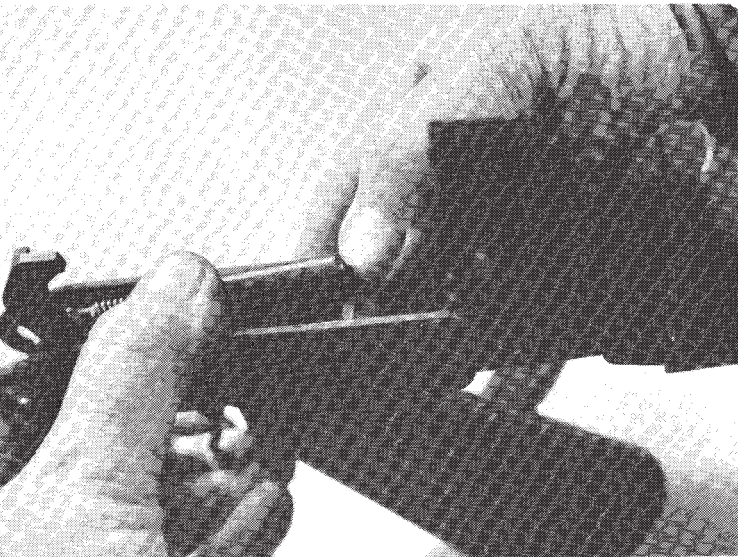
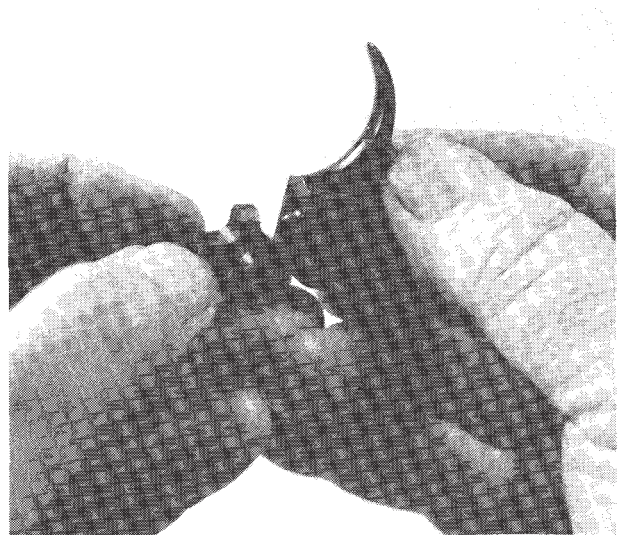
- 40.** Remove the gas cylinder plug, and take out the piston and its spring toward the front.

Reassembly Tips:

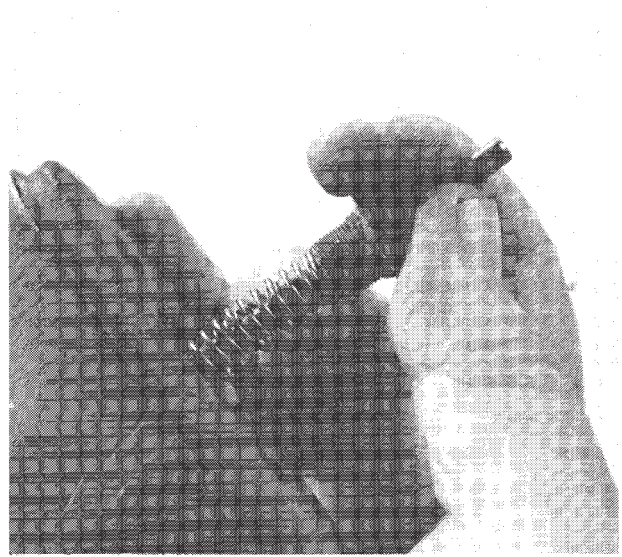
1. When replacing the gas cylinder plug, be sure the large letter "A" is on top when the plug is locked, as shown. If the plug is installed the other way, the gas system will be blocked. This is a feature for grenade launching. Note that the gas adjustment sleeve, to the rear of the sight, is designed to work with a special wrench. However, it can be turned with tools, if care is taken to avoid marring.



2. When replacing the trigger and sear assembly, be sure the sear is inserted with the large recess toward the rear, as shown, to mate with the plunger.



3. When reinstalling the hammer spring and its housing, seat the follower in the hammer recess, place the housing on top of the lower receiver, and push it forward and downward to lock in place.



4. To replace the recoil spring in the buttstock, use a rod small enough to pass through the hole in the retainer, to guide the spring, and use a screwdriver on each side in the slot to start the retainer into its threads. Avoid cross-threading.

FN-Model 1949 (ABL)

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the FN Model 1949 (ABL) also apply to the following guns:

Argentina (7.65mm)	Belgian Congo (30-06)
Belgium (30-06)	Brazil (30-06)
Colombia (30-06)	Egypt (7.92mm)
Luxembourg (30-06)	Netherlands East Indies (30-06)
Venezuela (7x57mm)	

Data: FN Model 1949 (ABL)

Origin: Belgium

Manufacturer: Fabrique Nationale,
Herstal, Belgium

Cartridges: 30-06, 7.92mm Mauser,
7.65mm Mauser,
7mm Mauser (7x57mm)

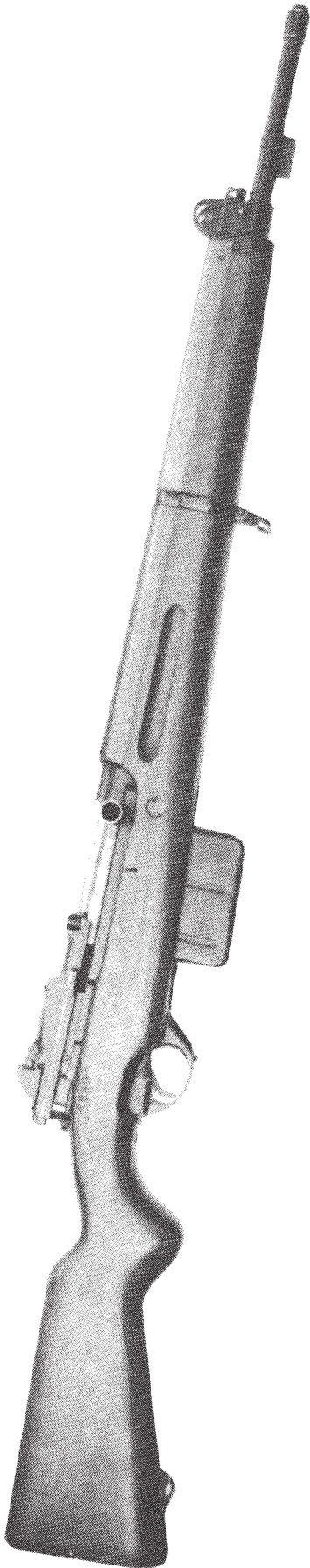
Magazine capacity: 10 rounds

Overall length: 44 inches

Barrel length: 23-1/4 inches

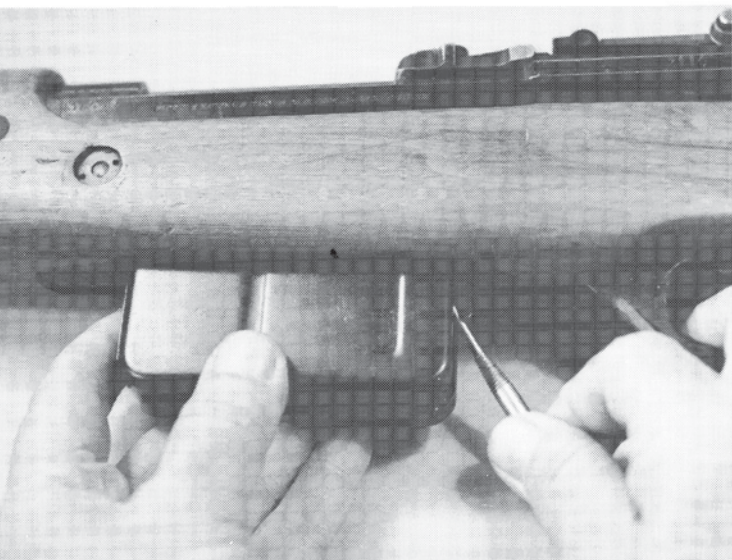
Weight: 9 pounds 8 ounces

Designed in Belgium before World War II by Dieudonne Saive, this rifle was introduced after the war as the FN Model 1949. In addition to use by Belgium, it was also adopted in several chamberings by Argentina, Belgian Congo, Brazil, Colombia, Egypt, Luxembourg, Venezuela, and Indonesia. Beautifully made and expensive to produce, it was soon replaced in the FN line by the FAL.

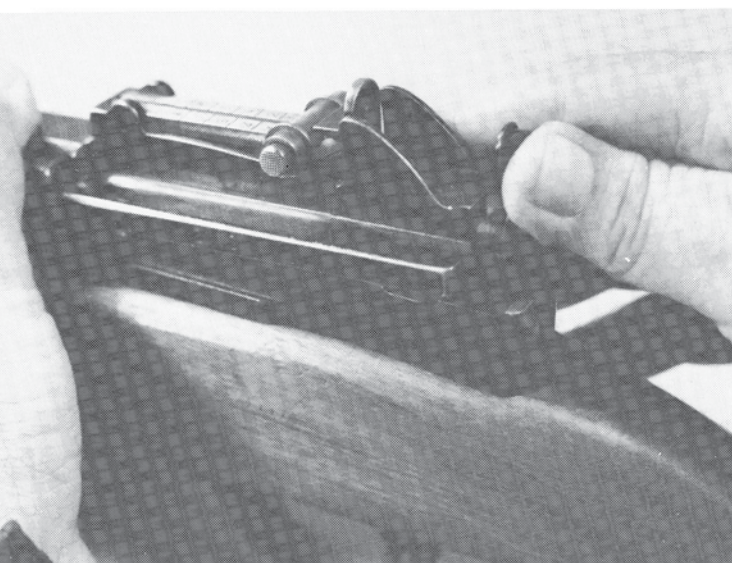
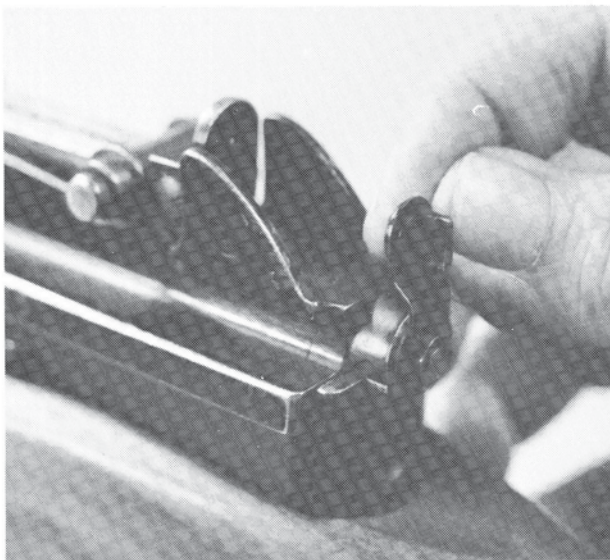


Disassembly:

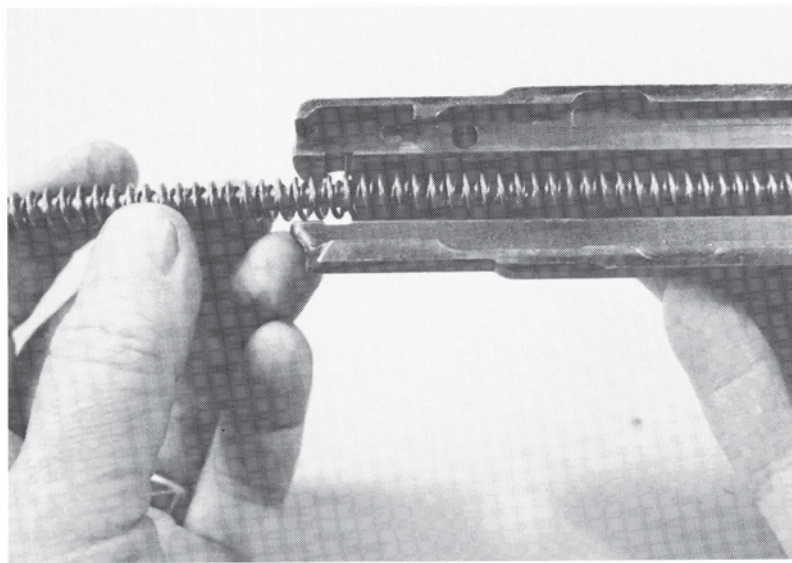
1. With the bullet-end of a cartridge or a suitable tool, move the magazine catch away from the back of the magazine, and remove the magazine downward.



2. Cycle the action to cock the hammer. Turn the latch at the rear of the receiver up to vertical position.

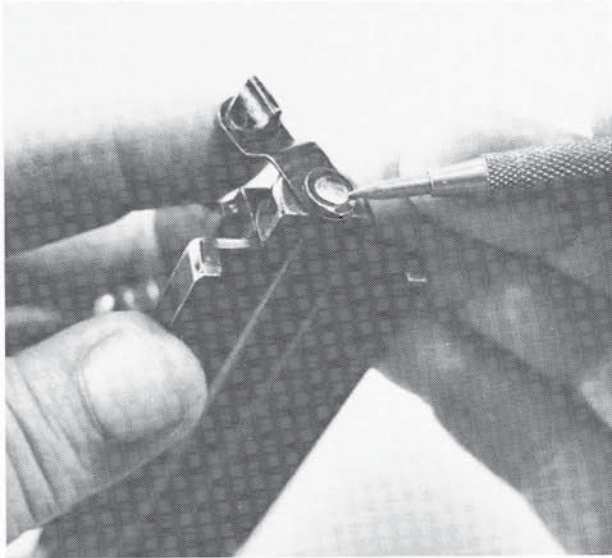


3. Push the cover assembly forward until it stops. Lift the assembly at the rear, and ease it off rearward, controlling the tension of the springs.

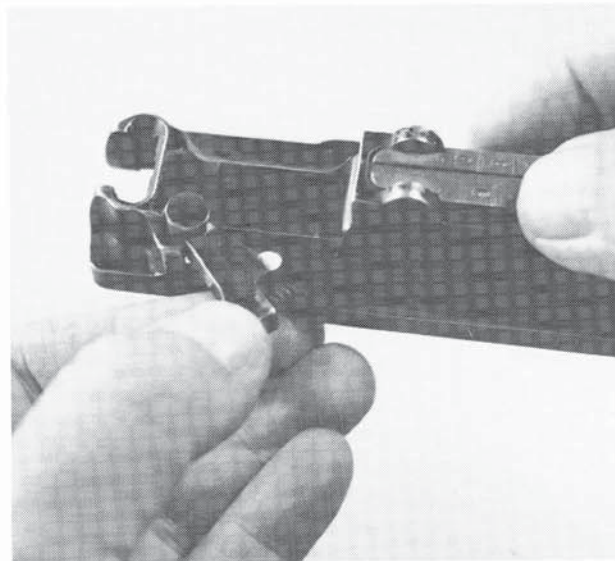
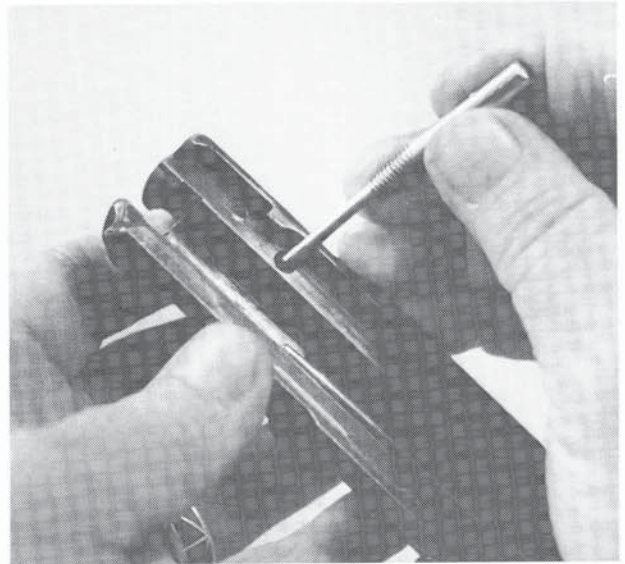


4. Remove the concentric recoil springs from their guide inside the cover.

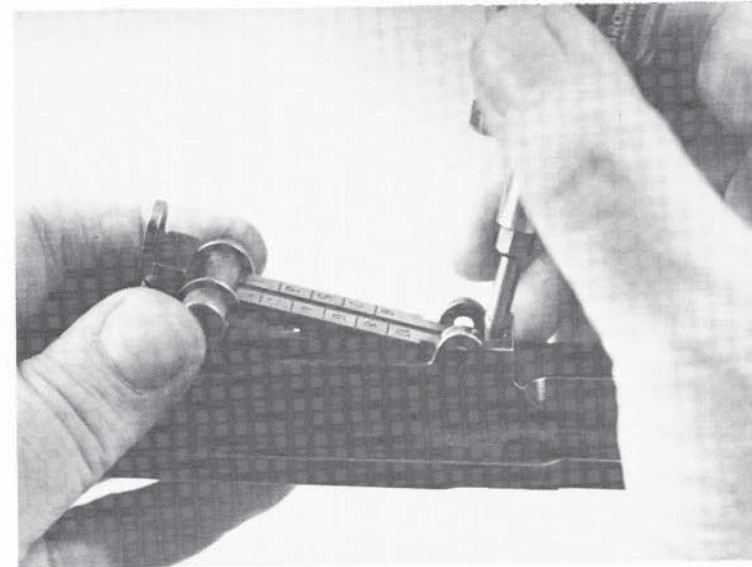
- 5.** The cover latch and spring guide is riveted in place at the rear, and it is not routinely removable.



- 6.** To remove the bolt hold-open latch, insert a tool on the underside of the cover and depress the latch stop, as shown.

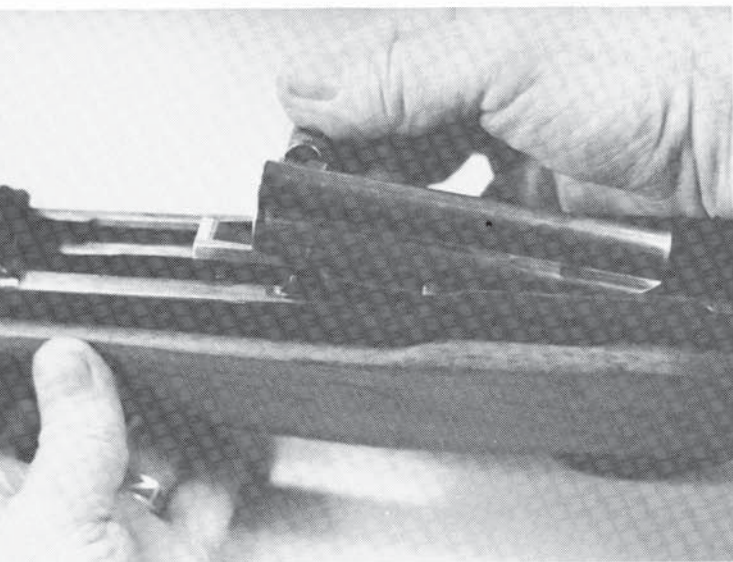


- 7.** Turn the latch outward, along with its mounted coil spring, and lift it straight up for removal. The latch stop, which is its own spring, is then easily taken out.

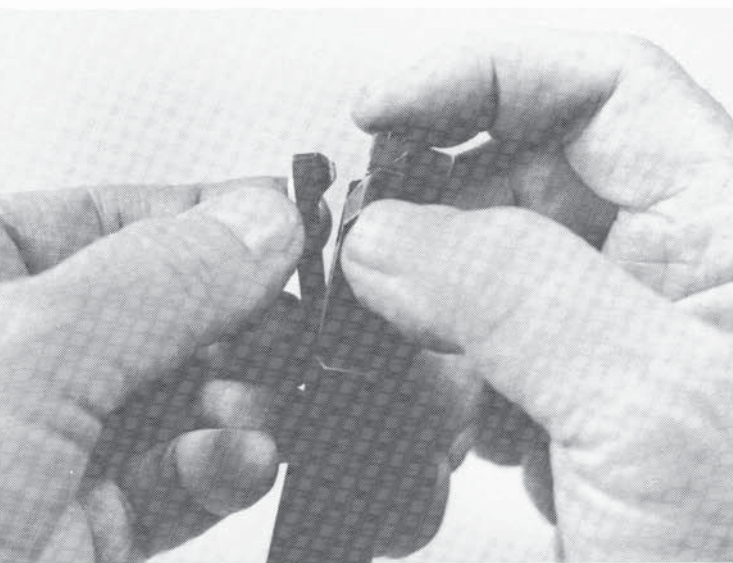
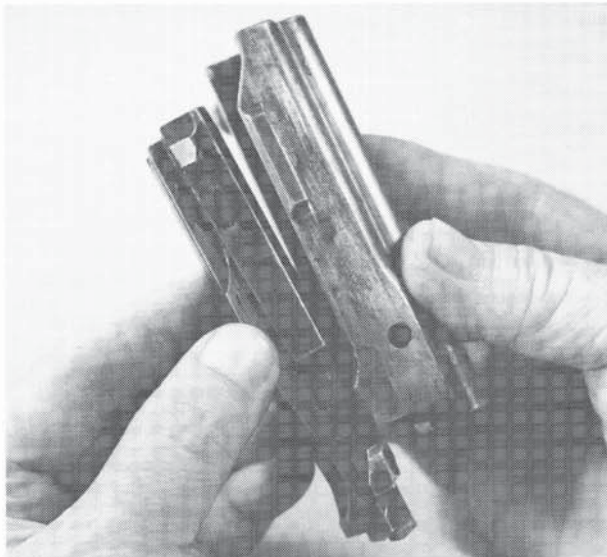


- 8.** To remove the rear sight, insert a tool in front, push downward on the sight bar, and lever it rearward. Using a tool in the hole at the rear, the sight spring can be moved forward for removal from the cover.

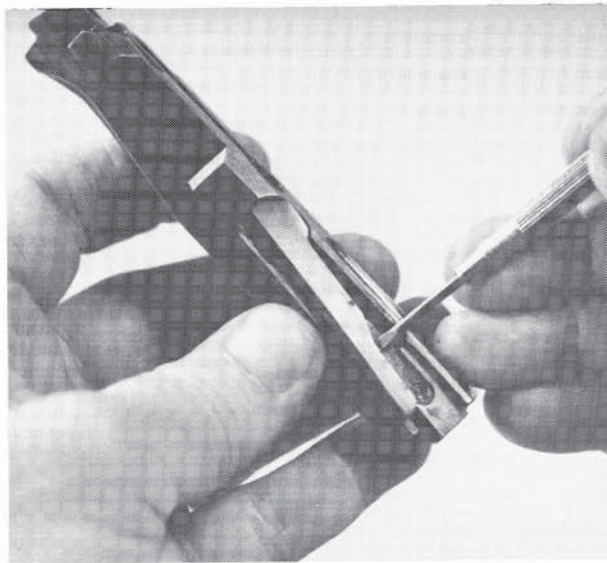
- 9.** Move the bolt and carrier rearward until it stops and lift the assembly straight up for removal.



- 10.** Move the bolt to the rear of the carrier, and lift it out.

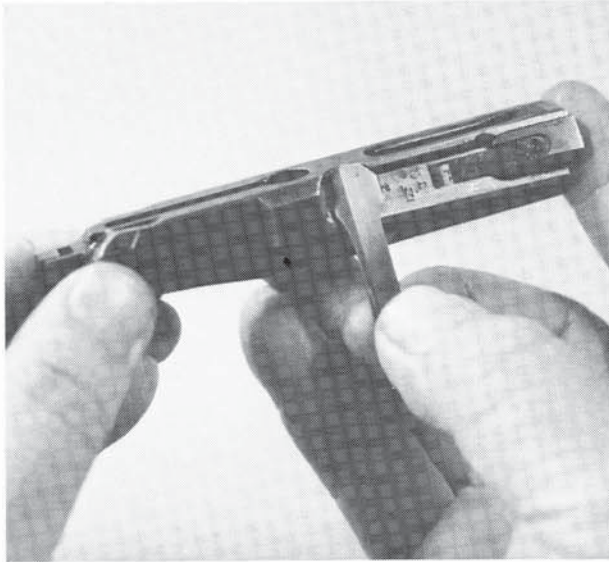


- 11.** Depress the firing pin at the rear of the bolt, and remove the firing pin safety stop.

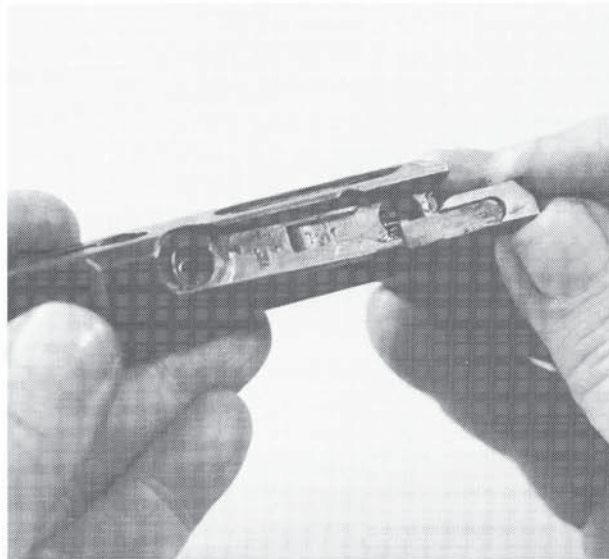
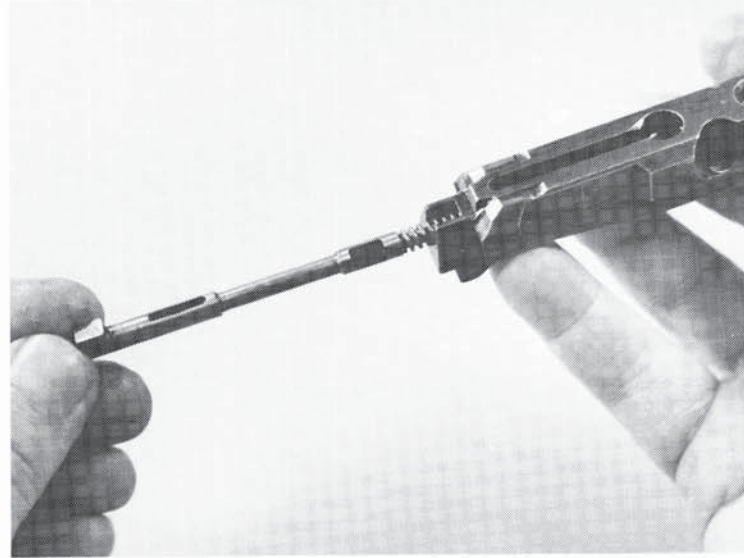


- 12.** Use a tool to flex the extractor spring out of its recess, and turn it downward.

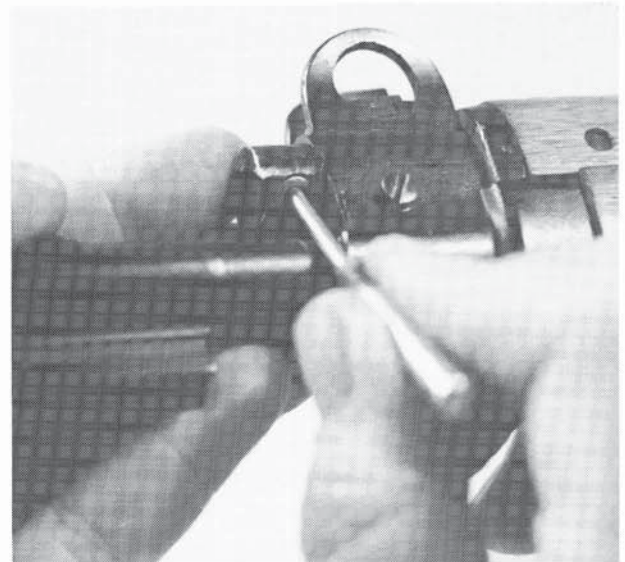
- 13.** Turn the extractor spring to the position shown, restrain the firing pin at the rear, and remove the spring.



- 14.** Remove the two-part firing pin and its return spring toward the rear.

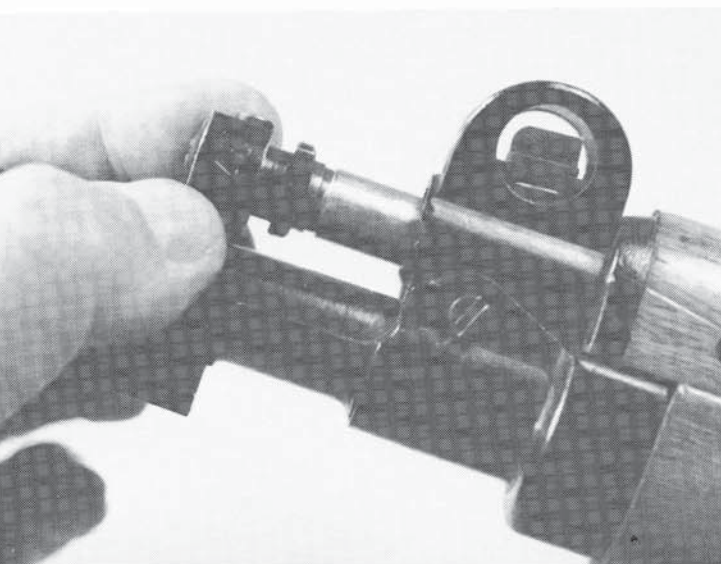


- 15.** Remove the extractor from its recess.

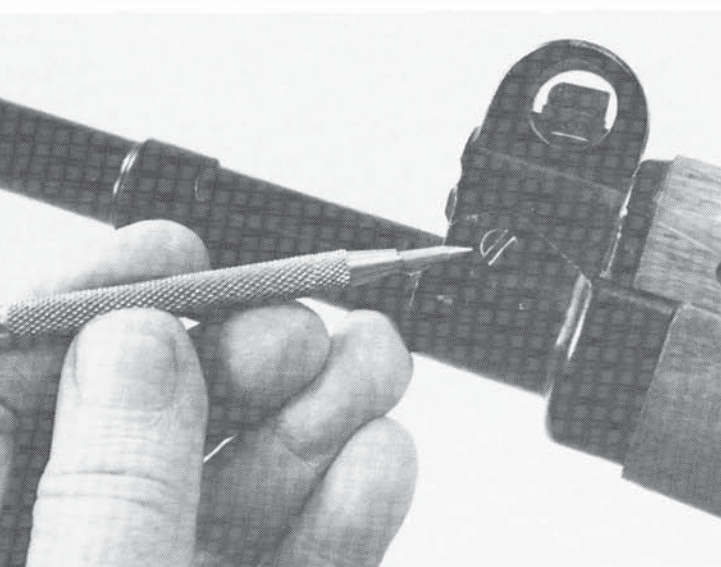
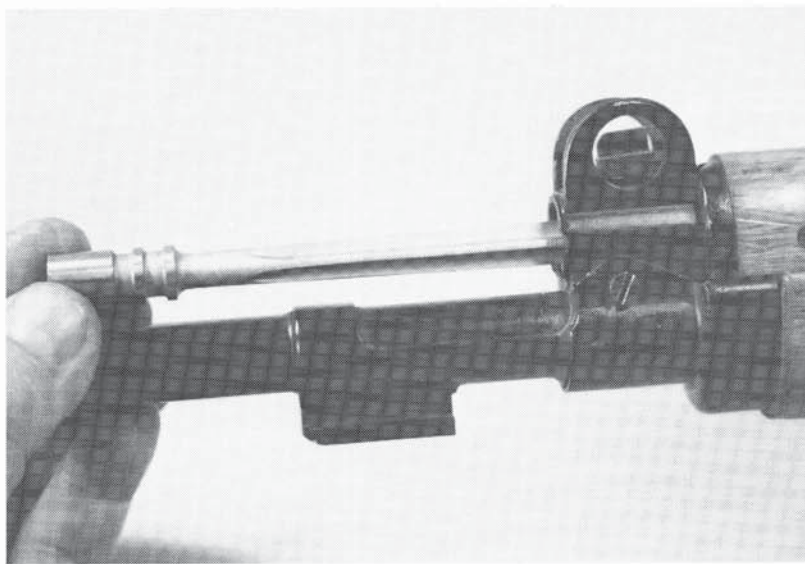


- 16.** Depress the lock plunger in the gas cylinder plug, and turn it clockwise, a quarter-turn, (front view) until it unlocks. **Caution:** Control the plug, as it will be pushed out by the piston spring. If the plug is tight, its front face is cut to fit the rim of a cartridge case, to provide leverage.

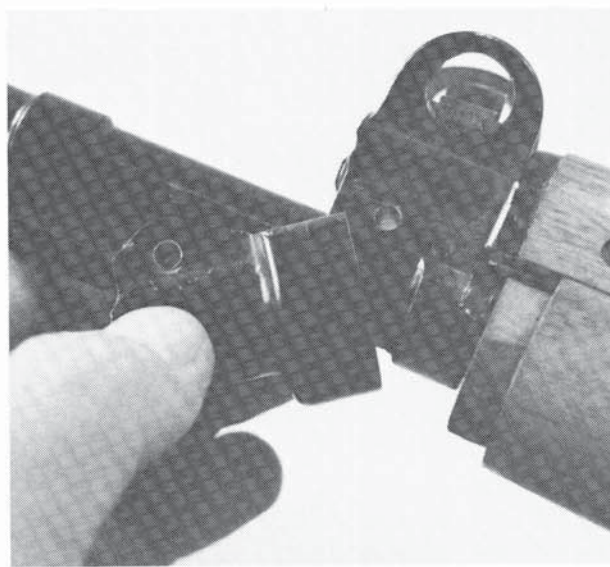
- 17.** Remove the gas cylinder plug toward the front.



- 18.** Remove the gas piston and its spring toward the front.

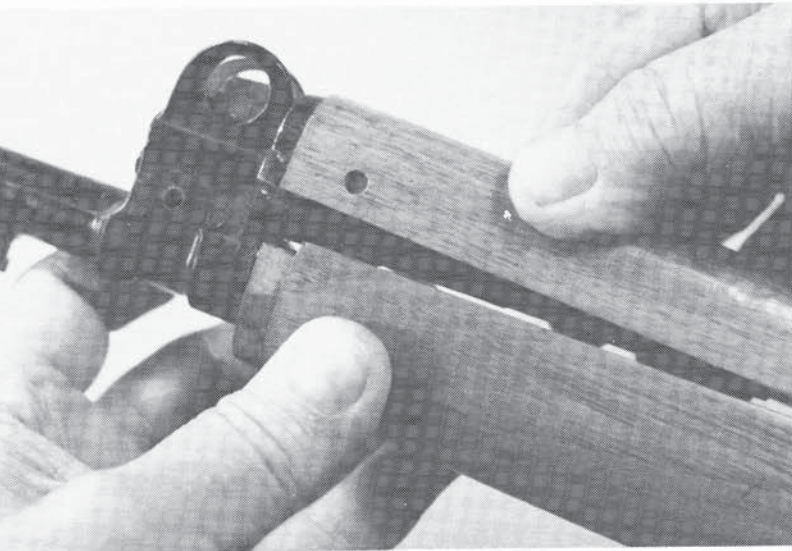


- 19.** Remove the cross screw in the stock end cap piece.

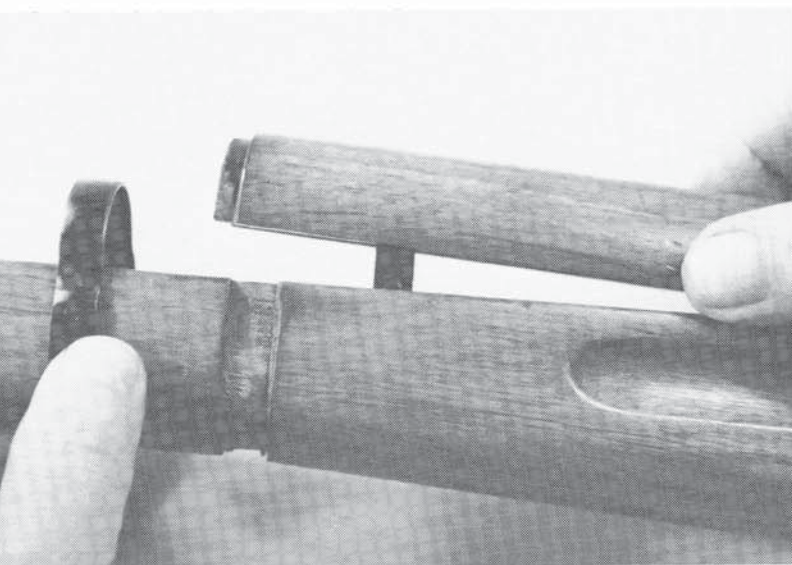
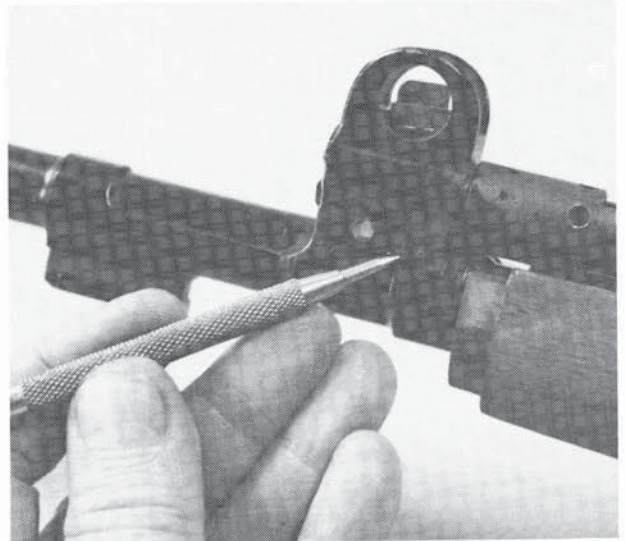


- 20.** Move the stock end cap off toward the front.

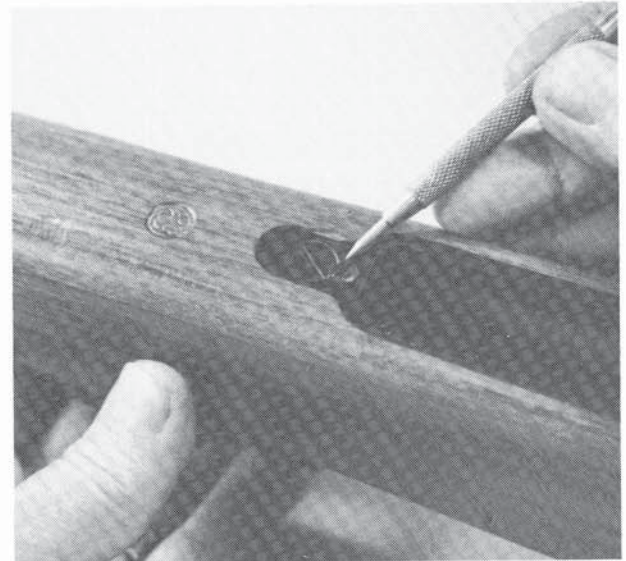
- 21.** Lift the front of the forward upper handguard until it clears the sight, and take it off forward.



- 22.** The gas cylinder assembly is not routinely dismountable. If the entire assembly is to be removed, it is retained on the barrel by the indicated cross pin. The muzzle cap must be unscrewed before this unit can be taken off.



- 23.** Back out the cross screw in the barrel band. The band will spring open, and the screw is captive in the band. Move the band off toward the front, and remove the rear upper handguard.

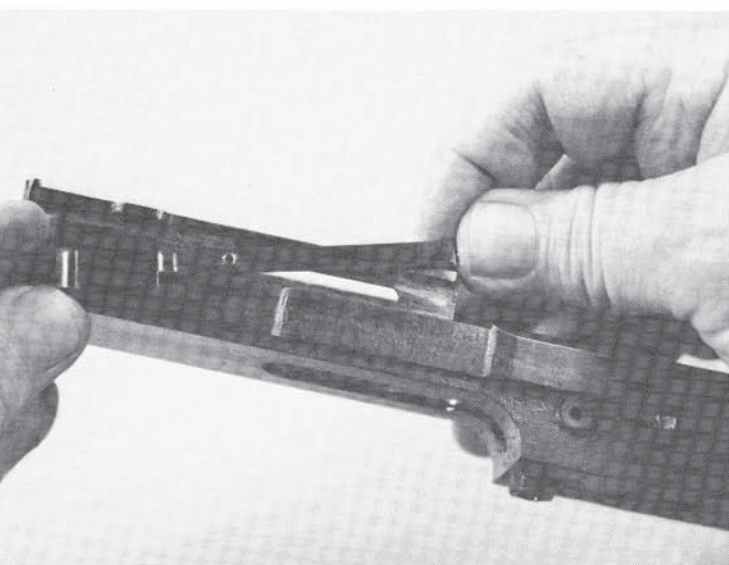
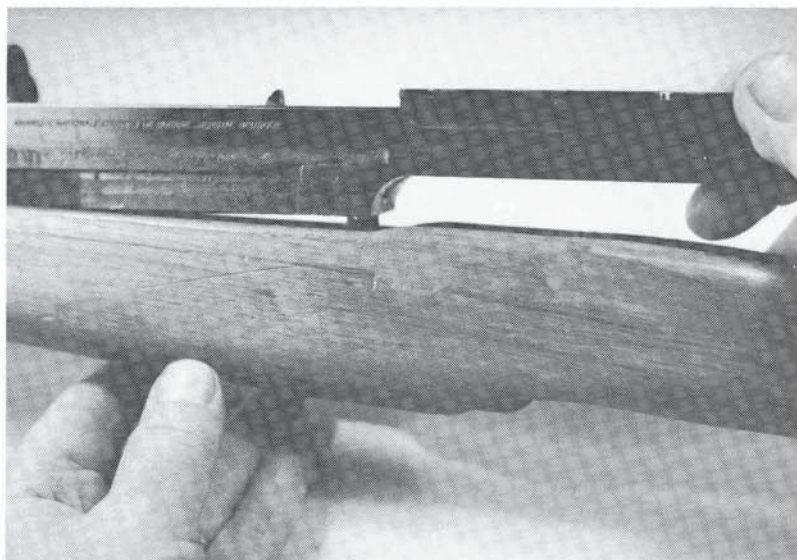


- 24.** Remove the lock screws and the large screws in the front, middle, and rear of the trigger guard unit. Note that these screws are of different lengths, and keep them in order for reassembly.

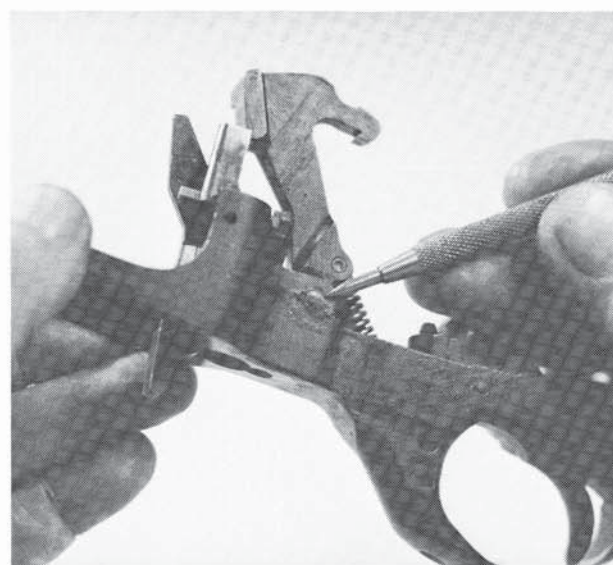
- 25.** Remove the trigger guard unit downward.



- 26.** Remove the action from the stock.

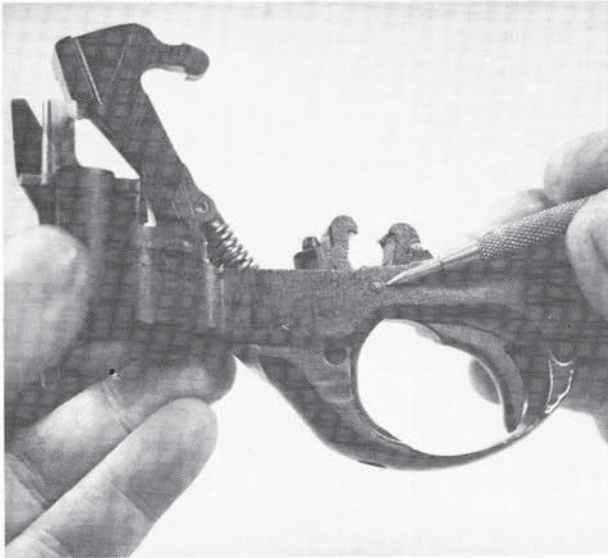


- 27.** If removal of the sliding dust cover is necessary, flex the forward end over the side rail, and turn it to vertical for removal.

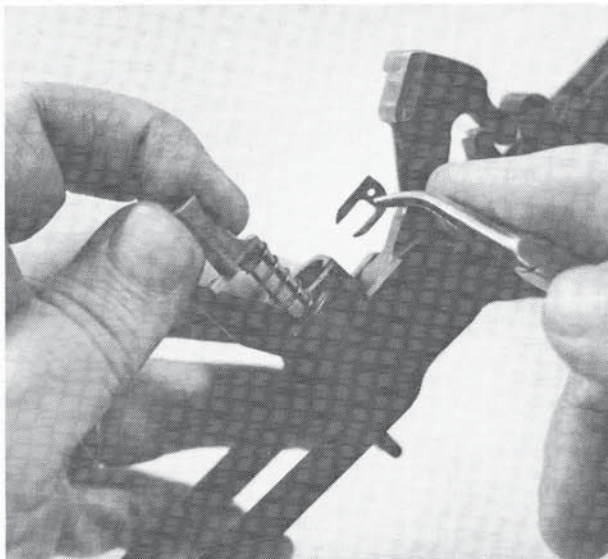
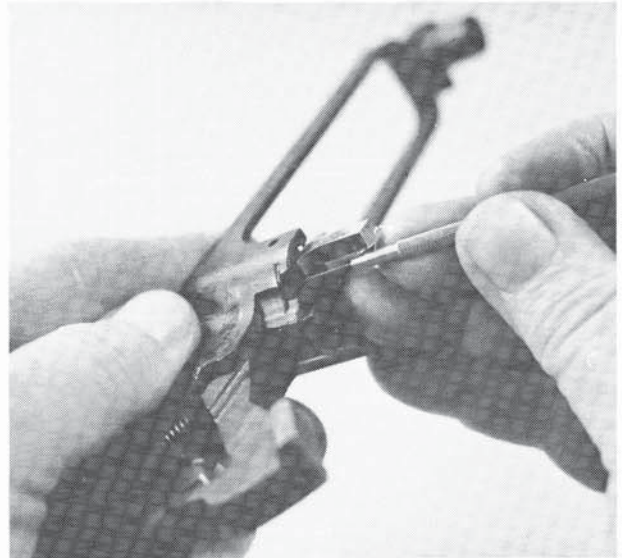


- 28.** The hammer cross pin is often heavily staked on both sides, and if so, it should be left in place unless necessary for repair. If the pin is drifted out, keep the hammer under control, as the twin concentric springs are powerful. The hammer must, of course, be in uncocked position.

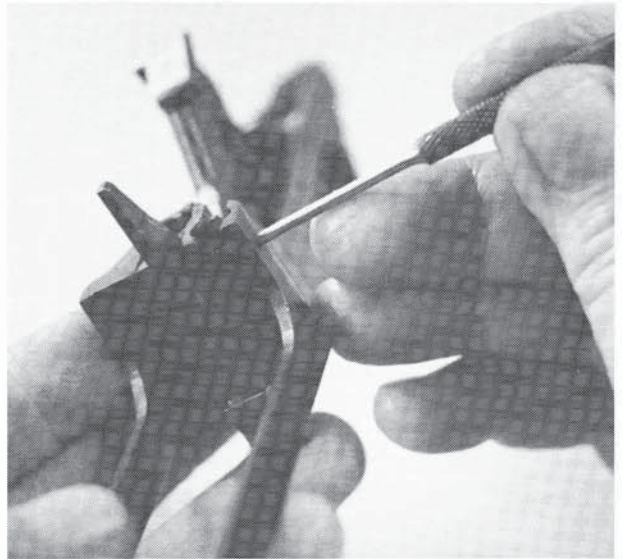
- 29.** The trigger cross pin is also staked, and the same remarks apply. Drifting out the trigger pin will release the trigger, trigger spring and plunger, auxiliary sear, and its spring and plunger for removal. A cross pin in the top of the trigger retains the auxiliary sear and its spring assembly. After the trigger is removed, the safety can be turned to mid-position and taken off toward the right.



- 30.** To remove the bolt hold-open, use a small tool to depress the plunger that locks the retainer plate, and move the plate off toward the rear. Control the plunger and spring.

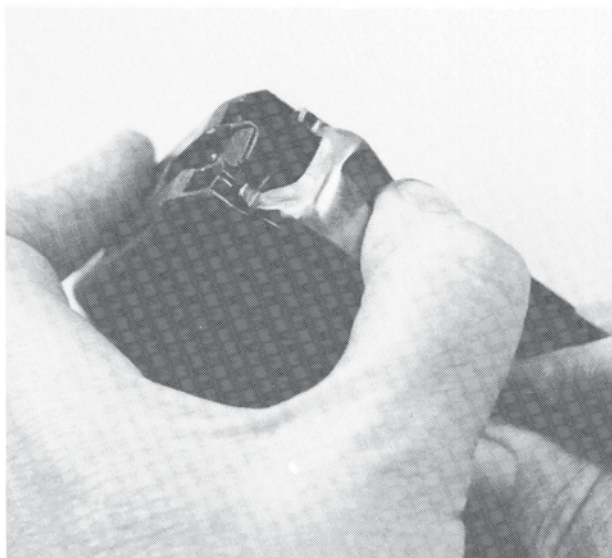


- 31.** Remove the bolt hold-open and its spring upward.



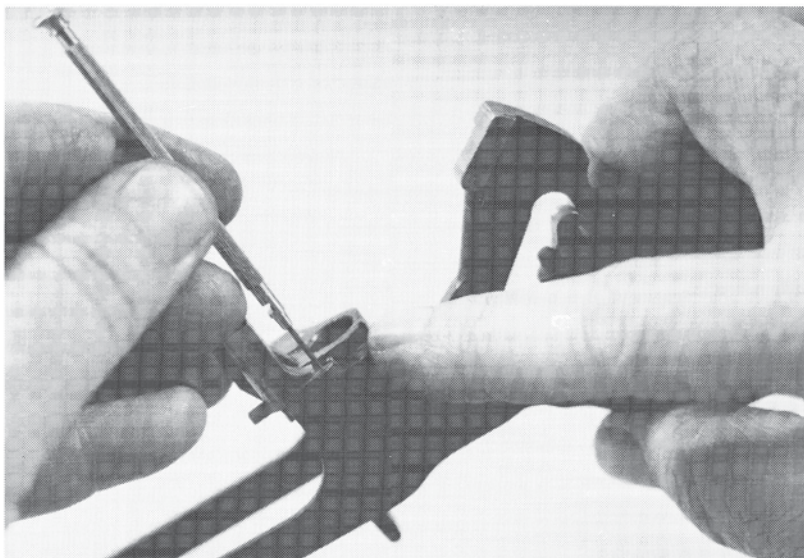
- 32.** A cross pin retains the ejector and the magazine catch and its spring. This pin is accessible only after removal of the hold-open assembly.

- 33.** To disassemble the magazine, push the front of the follower downward until the hook at the rear can be disengaged. The follower and spring can then be taken out.



Reassembly Tips:

- 1.** When replacing the hold-open assembly, insert a tool to ensure that the spring goes beneath the retaining plate.



- 2.** When replacing the gas cylinder, be sure the large letter is on top when the plug is locked in place. If the plug is installed with the letter on the bottom, the gas system is turned off, and the action will not cycle automatically. (This is a provision for launching grenades.)



Harrington & Richardson Ultra

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Harrington & Richardson Ultra also apply to the following guns:

H & R Ultra Hunter
NEF Hand-Rifle
NEF Survivor

H & R Ultra Comp
NEF Super-Light

Data: H & R Ultra Varmint
Origin: United States
Manufacturer: H & R 1871, Inc.
Gardner, Massachusetts
Cartridge: Various
Overall length: 39-1/4 inches
Barrel length: 24 inches
Weight: 7-1/2 pounds

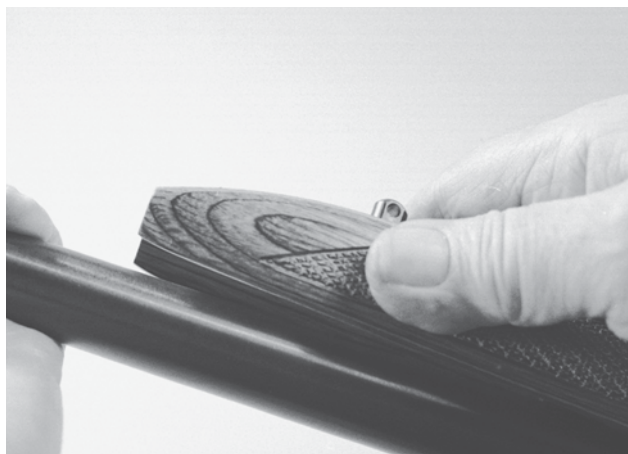
The basic design of this gun goes back nearly 100 years, and in those days it was a shotgun. There have been many modifications along the way, including an excellent transfer bar firing system and an improved barrel latch. The rifle shown here was introduced in 1993.

Disassembly:

- 1.** Remove the screw in the center of the forend.



- 2.** Tip the forend away from the barrel at the front, and remove it.

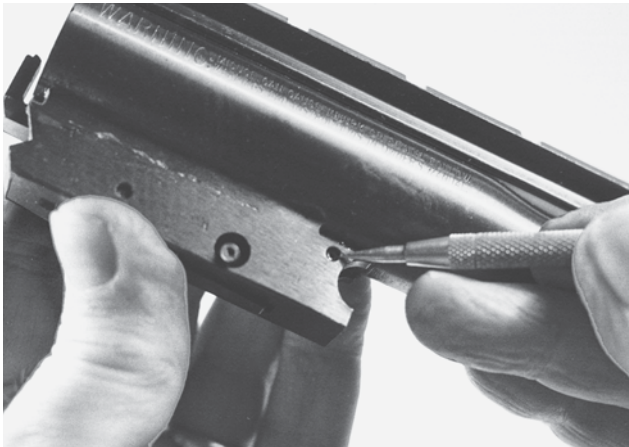


- 3.** Operate the barrel latch, tip the barrel upward, and remove the barrel unit upward and toward the rear.



- 4.** If removal of the forend base is necessary, it is retained on the wood by two Phillips screws.

- 5.** To remove the ejector, first use a proper roll-pin drift to drive out the small crosspin at the front of the barrel underlug. **CAUTION:** Be sure the ejector is "out" at the rear, and control the released ejector spring.



- 6.** Remove the ejector spring.



- 7.** Use a roll-pin drift to drive out the ejector trip pivot pin.



- 8.** By manipulation of the freed trip and the ejector, it is possible to take out the ejector at this point, without complete removal of the trip lever and its spring.

- 9.** If you do need to remove the ejector trip and its spring, it will be necessary to drift out the large roll-type crosspin in its forward end.



- 10.** Remove the buttplate or recoil pad. Use an extended socket wrench (9/16 or 14mm) to back out the stock-mounting bolt, and separate the receiver from the stock. Carefully inspect the crosspins to determine which end has the splines. In this case, the pins are driven out toward the left. Drift out the small crosspin at the front of the trigger guard.

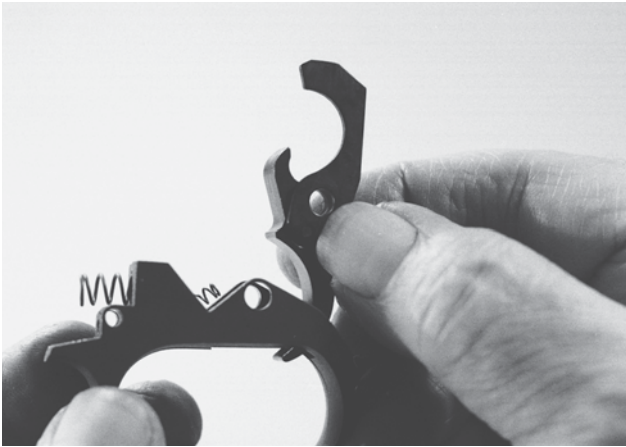


- 11.** Drift out the trigger crosspin.

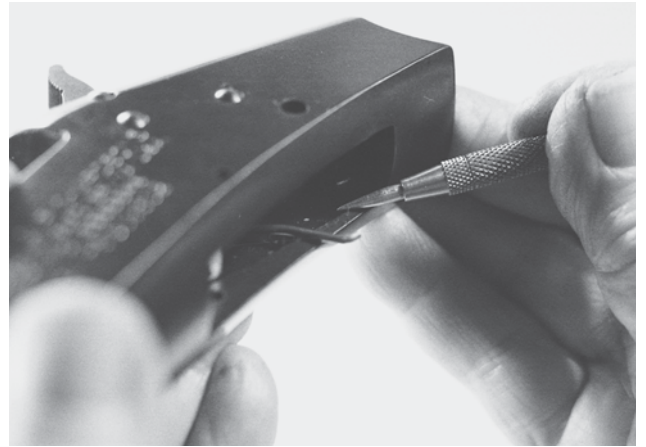


- 12.** Remove the trigger assembly downward.

- 13.** The trigger and its extension will be freed for easy removal, and the trigger and barrel latch springs are easily taken out of the unit.



- 14.** Use a tool to nudge the rear arm of the hammer spring off its inside shelf, relieving the tension.



- 15.** Drift the hammer pin about halfway out of the receiver.



- 16.** Remove the hammer spring.

- 17.** Drift the hammer pin the rest of the way out, and remove the hammer downward. Some manipulation of the hammer will be necessary, to clear the remaining internal parts.



- 18.** Drift out the barrel latch crosspin.



- 19.** Remove the barrel latch and transfer bar parts downward.



- 20.** The transfer bar is pivoted and retained on its lever by a crosspin that is riveted in place. This pin is not routinely removed.

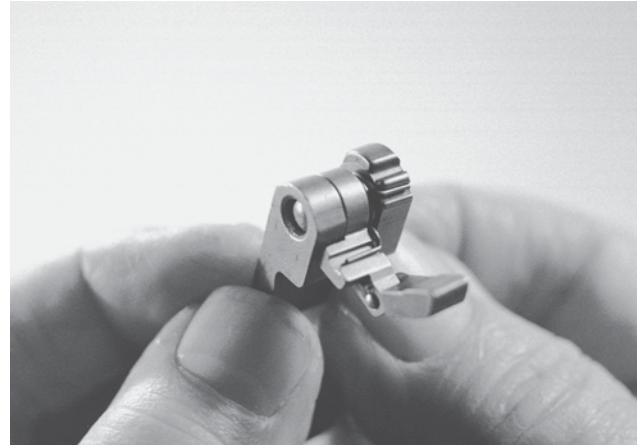
- 21.** Drifting out the top crosspin will release the barrel latch lever, the firing pin, and its spring. As the drift is taken out, control the firing pin and spring.



- 2.** When installing the hammer and its spring, be sure the short upper arm of the spring engages its stud on the hammer. A small tool with a notch at the end will be helpful in moving the hammer spring rear arm back onto its shelf.

Reassembly Tips:

- 1.** A slave pin will be necessary for re-insertion of the barrel latch and transfer bar unit, as shown. Be sure the cog at the top of the latch engages properly with the latch lever, to let its lower end have adequate protrusion into the well of the receiver for barrel contact.



- 3.** The same slave pin as used in #1, above, is also used for reinsertion of the trigger unit. Be sure the spring at the front of the guard engages the back of the barrel latch. As the trigger guard assembly is moved into place, it will be necessary to lift the barrel latch lever and move the hammer slightly to the rear.



Hi-Point Model 995

Data: Hi-Point Model 995

Origin: United States

Manufacturer: Beemiller, Inc.,
Mansfield, Ohio
(for MKS Supply, Dayton OH)

Cartridges: 9 x 19mm, .40 S&W, .45 ACP

Magazine Capacity: 10 rounds

Overall Length: 31-1/2 inches

Barrel Length: 16-1/2 inches

Weight: 4-1/2 pounds

Introduced in 1996, this neat and reliable little carbine uses polymer, formed steel, and alloy construction to keep the price very affordable. Where it matters, the parts are good steel. The gun is very durable, and it works, every time. It also has some nice design points - twin extractors and a drop-safe system.

Disassembly:

1. Remove the magazine, and pull the trigger to drop the striker to fired position. Use a 7/16-inch wrench to unscrew and remove the cocking handle. After the handle is taken off, the hold-open sleeve is easily slid off.



2. Using a 5/16-inch wrench, remove the two cap nuts on the left side of the receiver cover. It may be necessary to use a wrench on the other side to hold the crosspins.



3. After the crosspins are pushed out, remove the receiver cover upward.



4. If removal of the rear sight is necessary, it is held by two screws at the front, one at the rear, and one at the sight elevation screw. In normal takedown, the sight is best left in place.

- 5.** Lift the barrel shroud at the rear, disengage it at the front, and take it off.



- 6.** Remove the Allen screw near the front of the stock unit.



- 7.** Use a non-marring tool to slide the retainer clip off the action-mounting lug toward the front. The tool may have to be tapped with a small hammer to start it.

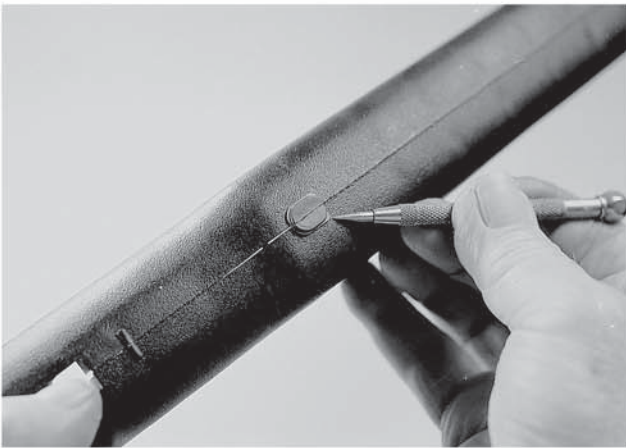


- 8.** Lift the barrel and receiver unit at the front, and remove it from the stock.

- 9.** The magazine release button is a press fit on its shaft, and it should not be disturbed in normal takedown. If access to the magazine catch and spring is necessary for repair, you must separate the two sides of the stock unit.



- 10.** If this must be done, it will require removal of screws on each side of the handgrip, and six cross-screws in the stock unit.



- 11.** After the eight screws are taken out, there are two small clips on the underside of the stock and trigger guard that must be removed before the two sides of the stock are separated.

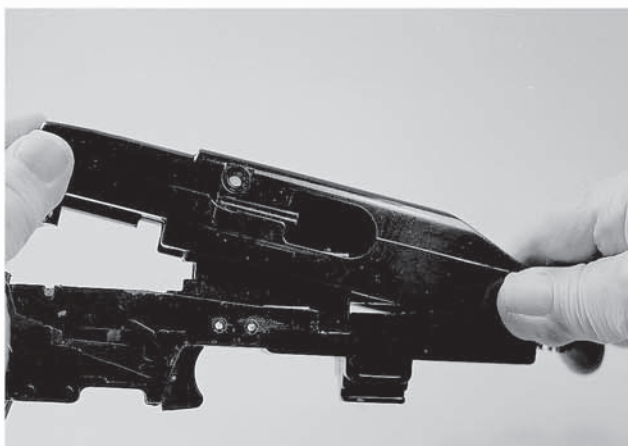


- 12.** Drift out the roll-pin at the rear of the receiver unit.

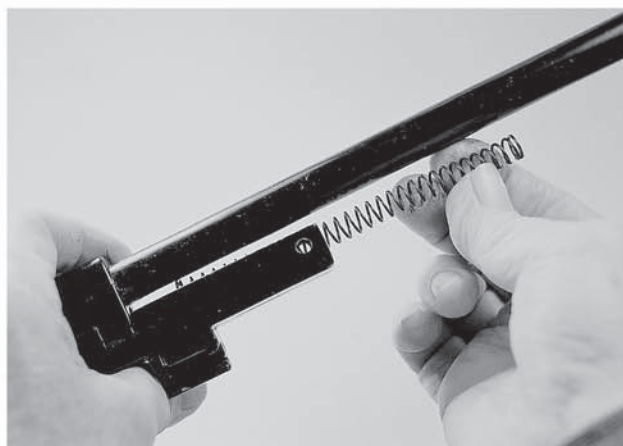
- 13.** Move the breech block slightly to the rear, just enough to clear the extractors from their recess in the barrel, and lift the breech block at the rear to pull the under lug of the striker spring base out of the receiver unit.



- 14.** The spring base will often be tight, and will require the insertion of a small tool to assist it upward.



- 15.** Restrain the breechblock against the tension of the recoil spring, tilt it upward to clear its lower edge above the barrel, and ease it off toward the front. Some manipulation will be necessary to clear it past the front sight.

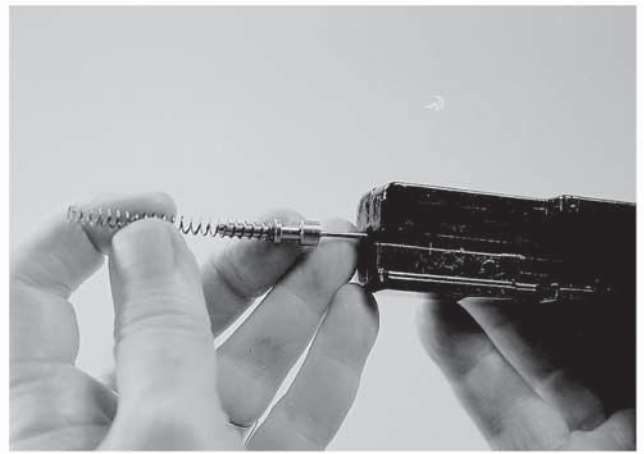


- 16.** Remove the recoil spring from its channel below the barrel.

- 17.** Remove the striker spring base from the rear of the breechblock unit.



- 18.** Use a small tool to start it rearward, and remove the striker and its spring.



- 19.** The twin extractors are pivoted and retained by a vertical pin, accessible on the underside of the breechblock. **CAUTION:** Control the coil spring that powers the extractors.

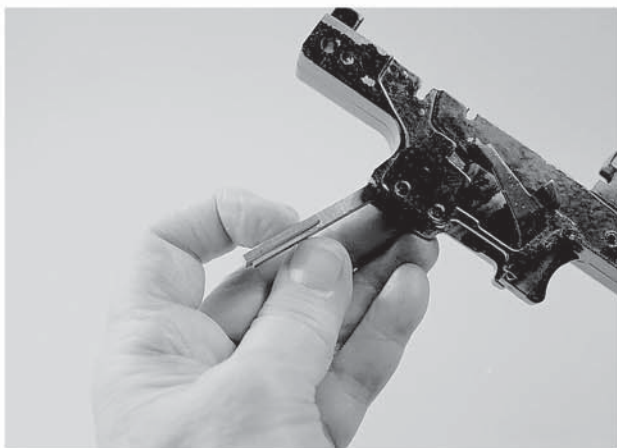


- 20.** Restrain the sear, and tip the sear lever off the crosspin. Remove the sear lever upward and toward the rear.

- 21.** Remove the sear and its spring upward.



- 22.** Push the drop safety to its upper position, and use a small tool to lift the sear block arm to vertical.

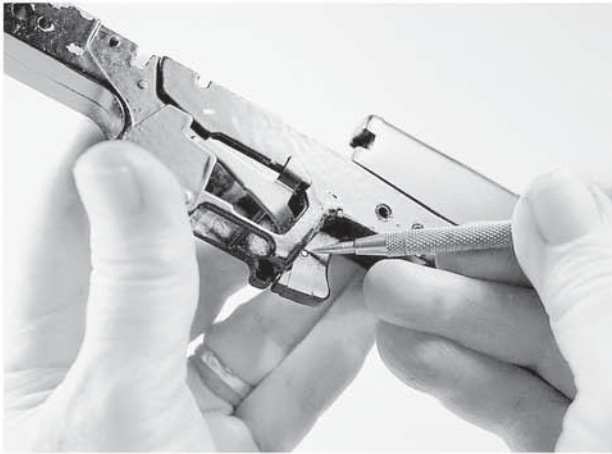


- 23.** Remove the drop safety bar downward.



- 24.** The arm can then be taken out toward the right. Drifting out the trigger crosspin will allow the trigger to be moved rearward and taken out downward, along with the attached trigger bar. The small trigger pin is near the edge in the alloy receiver unit, and except for repair, this system is best left in place.

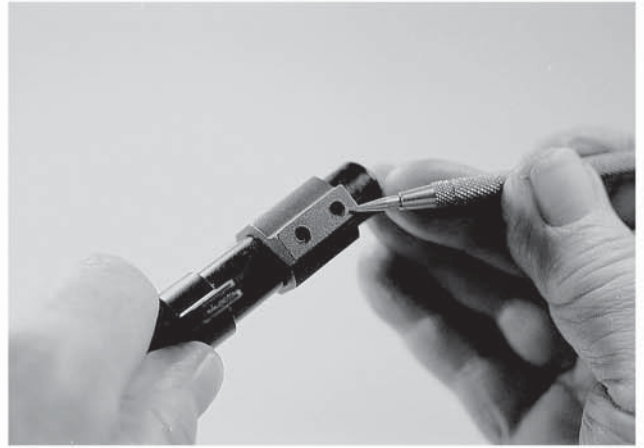
- 25.** If the trigger has been removed, drifting out this crosspin will release the trigger bar and its spring. Control the spring.



- 26.** The safety and its detent ball and spring are not routinely removable.



- 27.** The front sight post and ring are vertically adjustable. If the adjustment screw is backed all the way out, the post and ring can be taken out upward.



- 28.** The front sight base is retained on the barrel by two screws on the underside. With those removed, the base, and the barrel band, can be slid off toward the front.

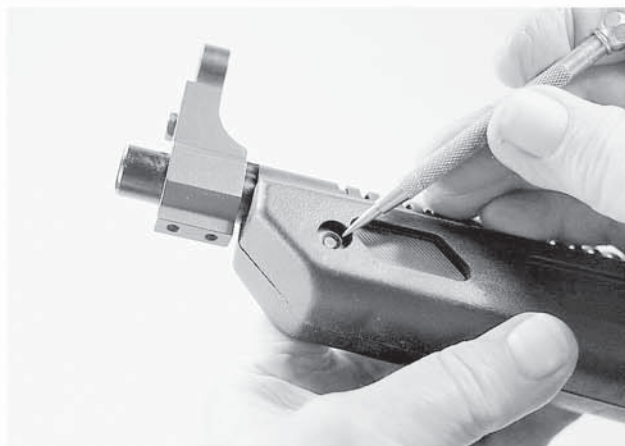
- 29.** If necessary for repair, the barrel can be removed from the receiver unit by drifting out two roll-type crosspins.



- 2.** When installing the breechblock, use a tool to guide the under lug of the striker spring base into its hole in the receiver. Insert a drift to align the holes before the crosspin is driven into place.

Reassembly Tips:

- 1.** Be sure that the sear and the sear lever are installed as shown.



- 3.** Make all of the cross-screws snug, but avoid over-tightening in this polymer stock.



HK SL8-6

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the HK SL8-6 also apply to the following guns:

HK SL8-1

Data: HK SL8-6

Origin: Germany

Manufacturer: Heckler & Kock Sidearms GmbH

Cartridge: .223 Rem.

Magazine Capacity: 10 rounds

Overall Length: 38.6 inches

Barrel Length: 20 inches

Weight: 9.25 pounds

A very accurate rifle, the SL8 series is the civilian legal version of the German G36 assault rifle. Certain things have been done to make importation acceptable, such as limiting the magazine capacity and well size, using a thumbhole stock, and forgoing threading to the barrel. The rifle is still of a modular nature, however, and many owners elect to upgrade the rifle to more closely model the parent design's appearance. Upgraded models will still have much the same takedown steps.

Disassembly:

1. Remove the thumbnut located at the forward right side of the optic rail, then pull the pin out to the left by the sling swivel loop.



2. Pull the handguard forward over the barrel and off the rifle.

- 3.** Push out the magazine well retaining pin.



- 4.** Rotate the magazine well down from the rear while depressing the magazine catch. Depressing the catch will allow sufficient clearance for the mag well to rotate forward for removal.



- 5.** Remove the large screws located on either side at the rear of the receiver, just above the thumbhole.

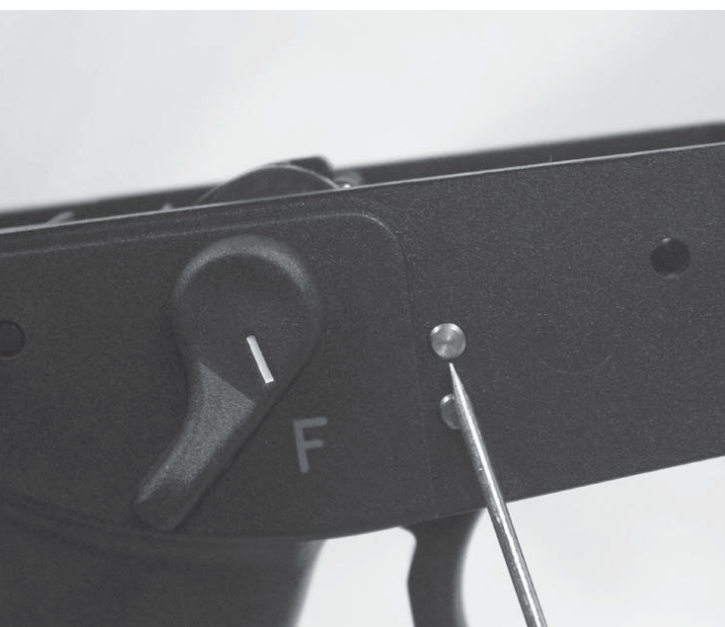
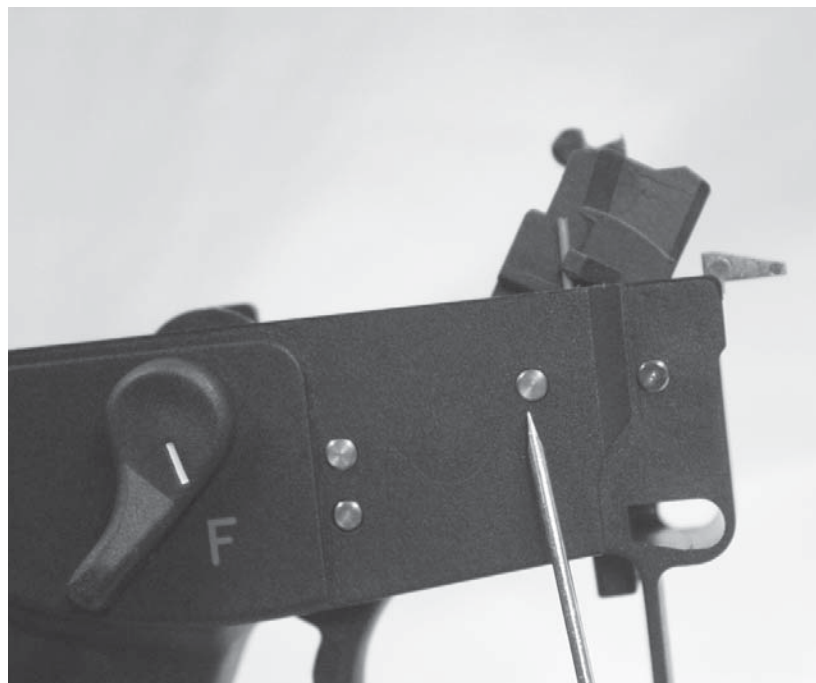


- 6.** Pull the thumbhole stock off the receiver straight to the rear.

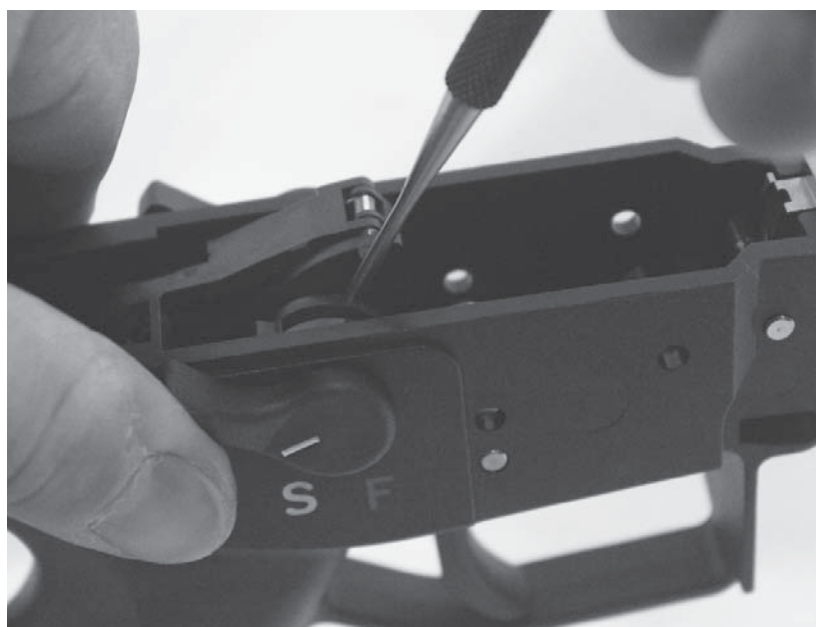
- 7.** Remove the return spring assembly by pulling it forward out of its recess in the stock. It is not necessary to disassemble it unless it needs repair.



- 8.** Drive out this pin to free the hammer.

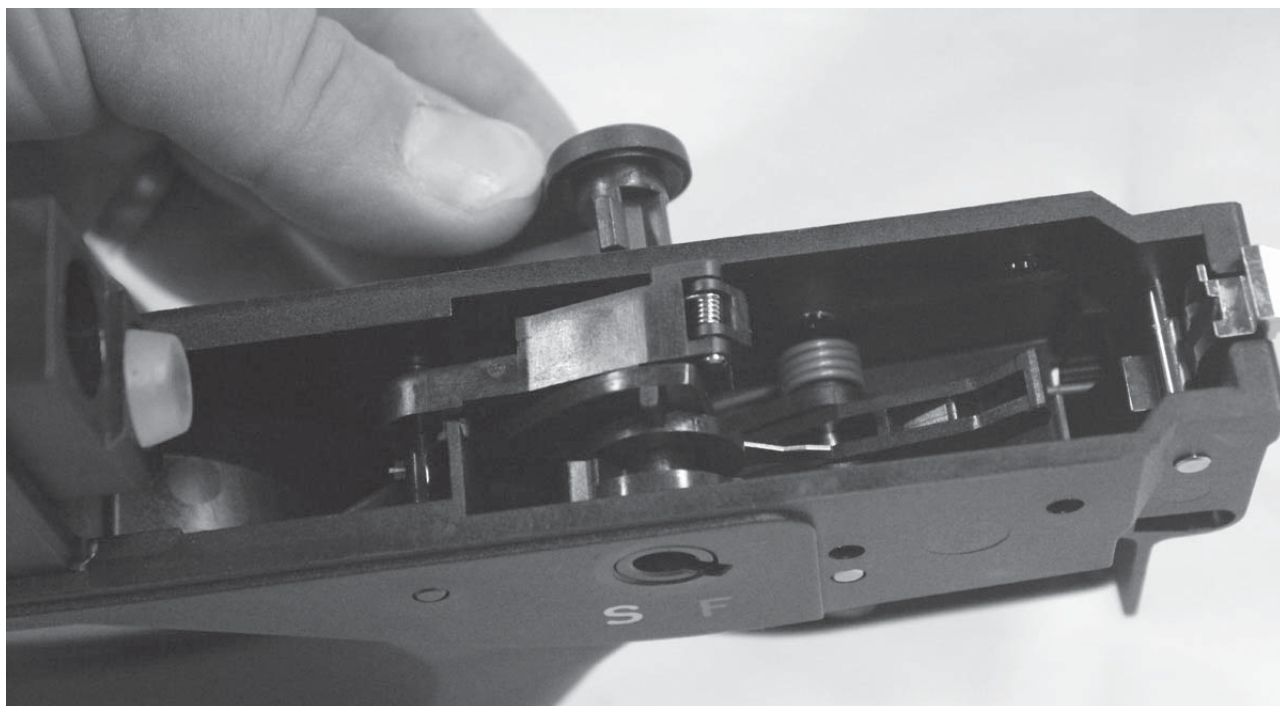


- 9.** Push out this pin.

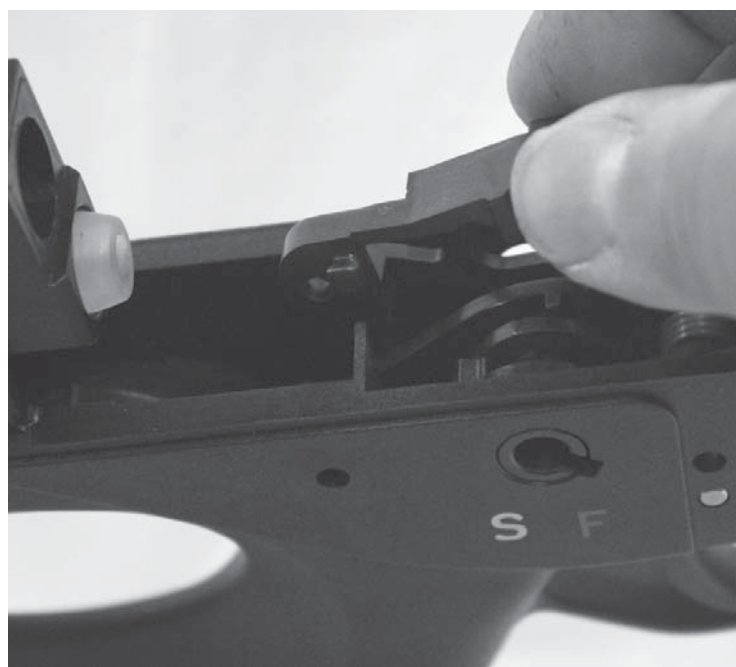


- 10.** Depress the index plate (the large, thin, loop-like piece just to the right of center). While depressed, rotate the safety lever past safe until it stops. The right safety lever can then be pulled out to the right.

- 11.** Pull the left side safety lever out.



- 12.** Push out the locking lever (disconnecter) pin.

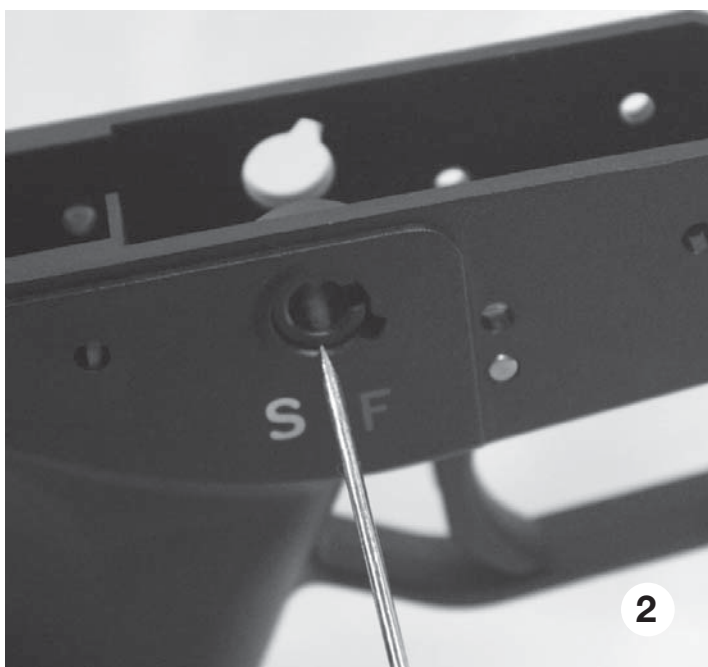
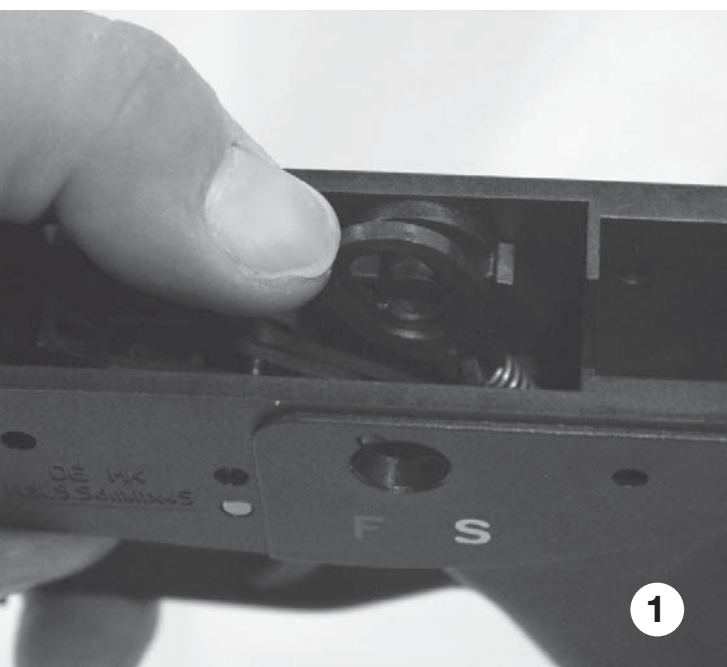
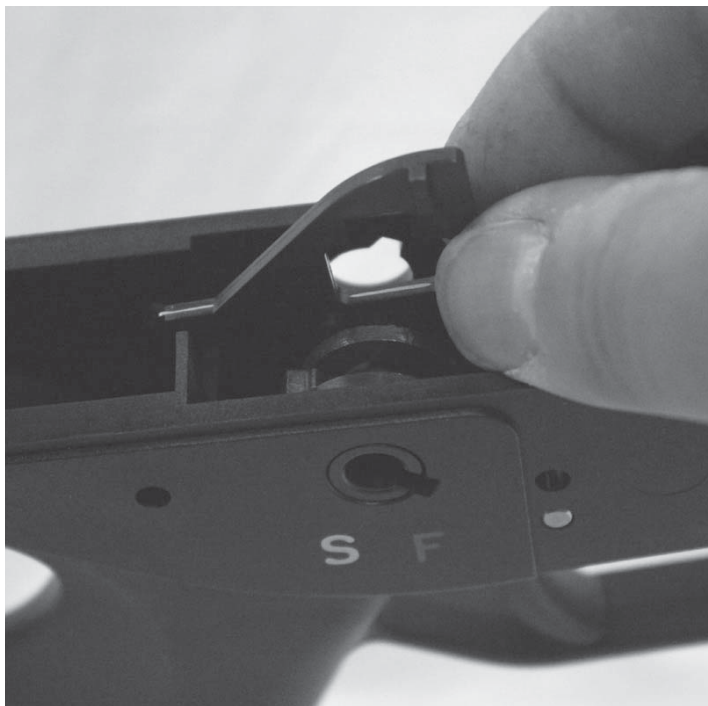


- 13.** Remove the locking lever.

- 14.** The locking lever has a smaller lever and spring that need not be removed unless damaged.

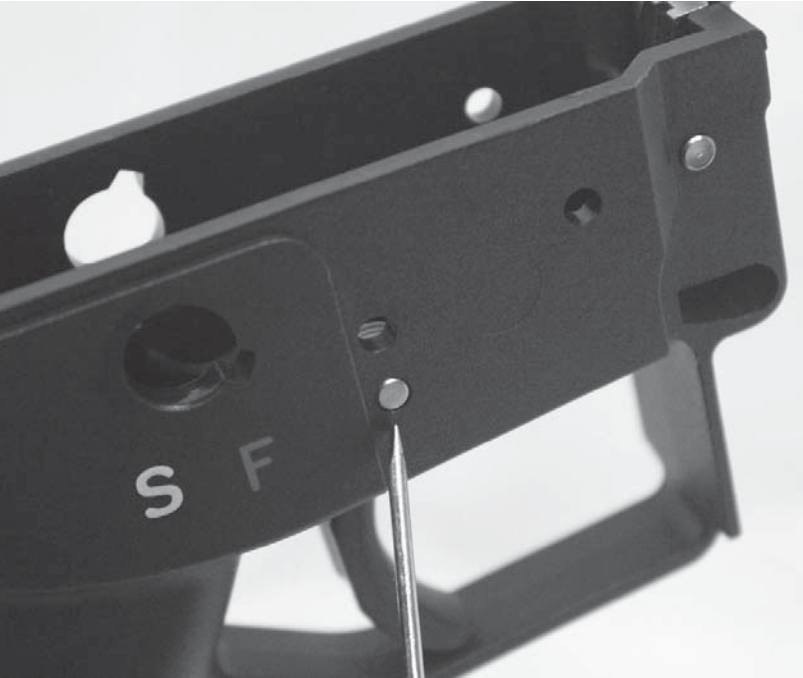


- 15.** Remove the center plate.

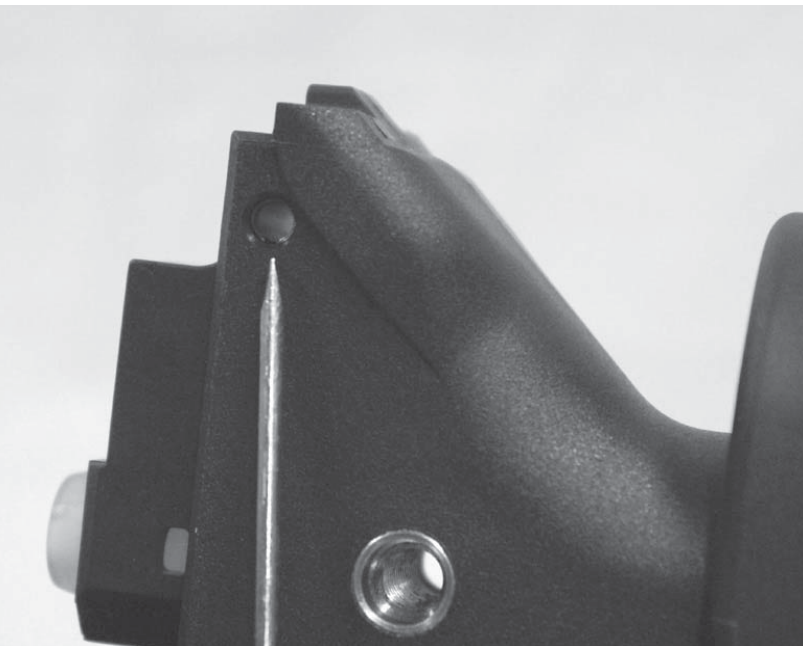
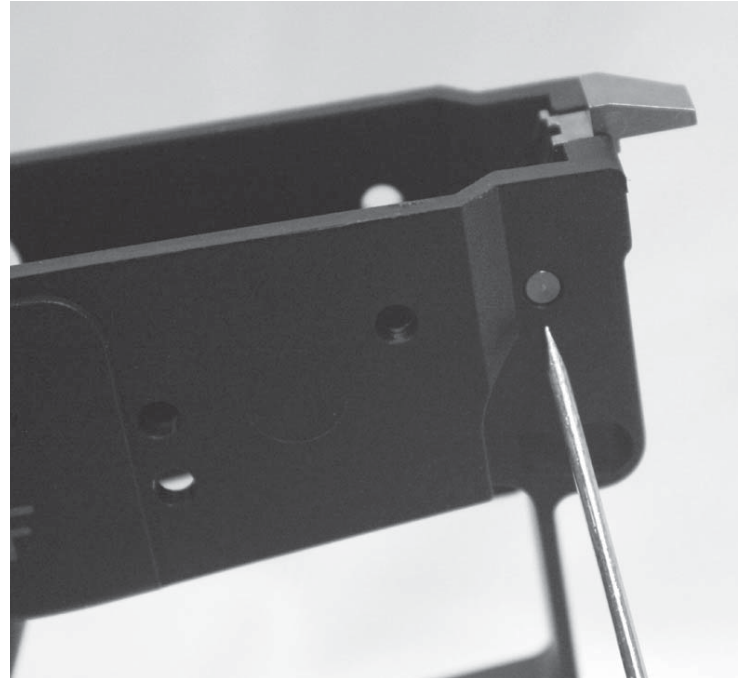


- 16.** Remove the index plate and its spring. Push the index plate in toward the center of the cavity, disengaging it from the notched disk that sleeves the right side safety lever (picture 1) and pull the plate and spring out. Then remove the disk by pushing it inside the cavity (picture 2).

- 17.** Push out the trigger pin. The trigger, sear, both trigger springs, and sear spring can then be lifted out of the cavity.



- 18.** Push out this pin to remove the bolt stop.

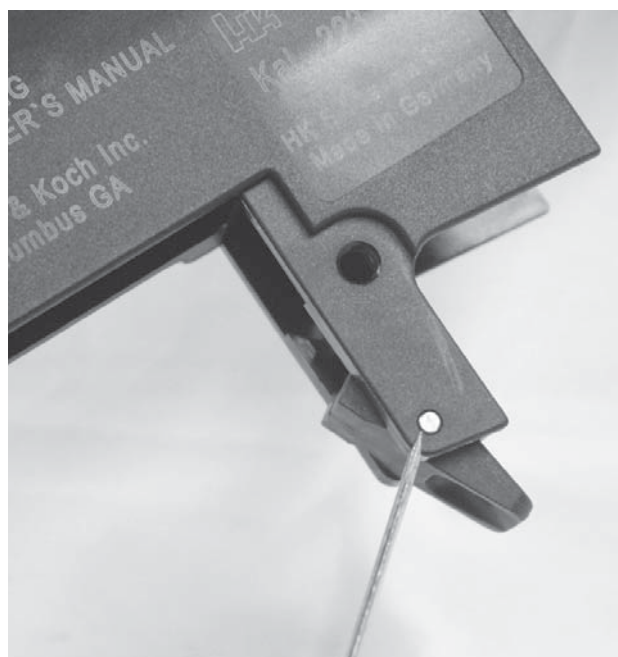


- 19.** Driving out this roll pin will release the back plate for removal. It will slide up and out of the stock.



- 20.** Removal of these screws allows the cheekpiece to be removed. There may be a spacer underneath the cheekpiece to vary the height.

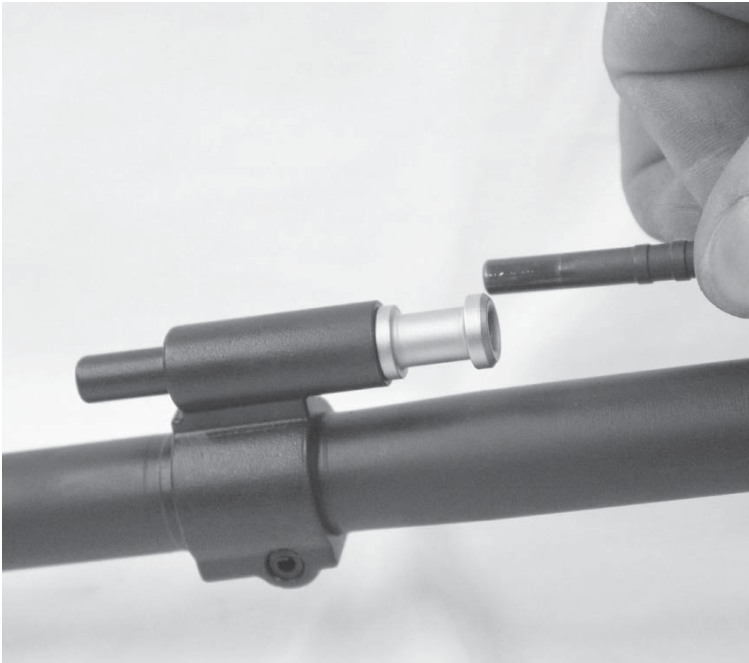
- 21.** The buttpad can be removed or extended by removing the two opposed screws in the buttstock (picture 1). Additional spacers can be inserted between the pad and the stock (picture 2).



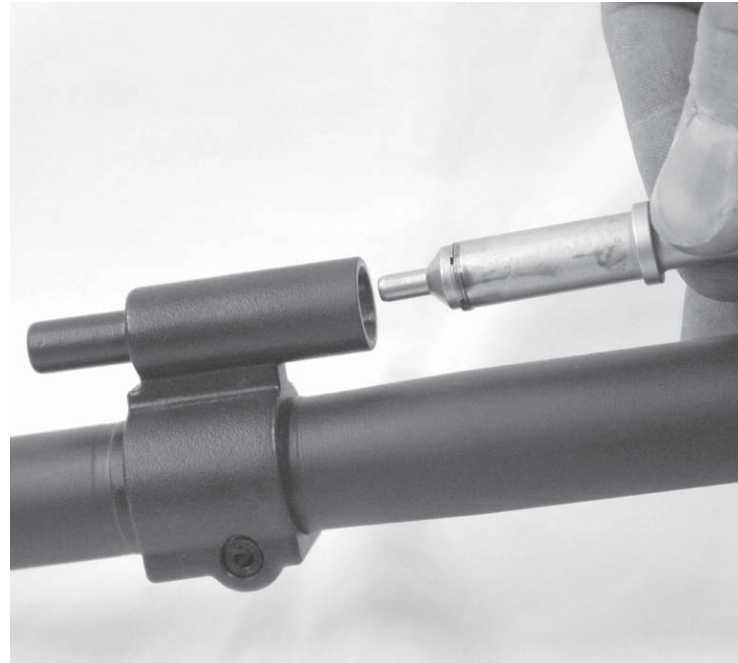
- 22.** Remove the bolt assembly by pulling it straight out to the rear.

- 23.** If necessary, the magazine catch and spring can be removed by driving out this pin.

- 24.** Pull the operating rod to the rear and then angle it to the side to pull it forward and out of the receiver. The spring and plate will slide right off the operating rod.



- 25.** Pull the piston out of the gas block. Leave the gas rings on the piston unless they require replacement.

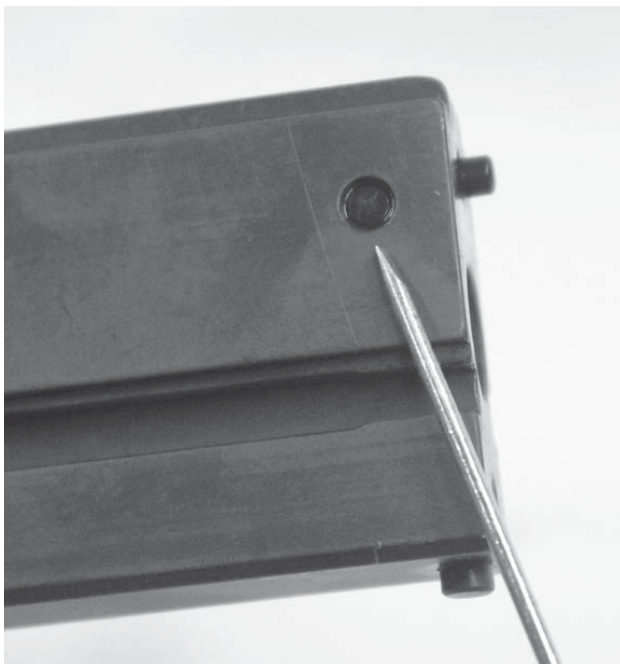


- 26.** The three Phillips screws on the optics rail can be completely unscrewed and the rail removed, if necessary.

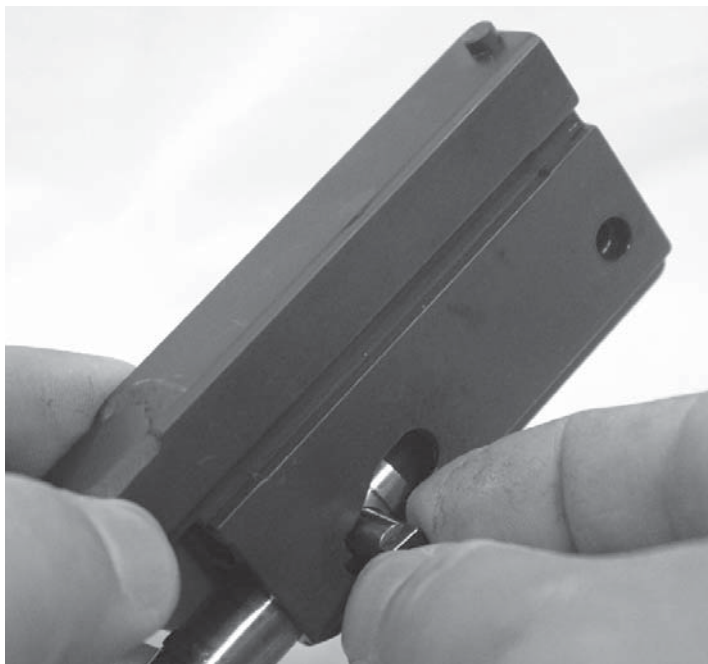


- 27.** The gas block can be removed by necessity by driving out this roll pin.

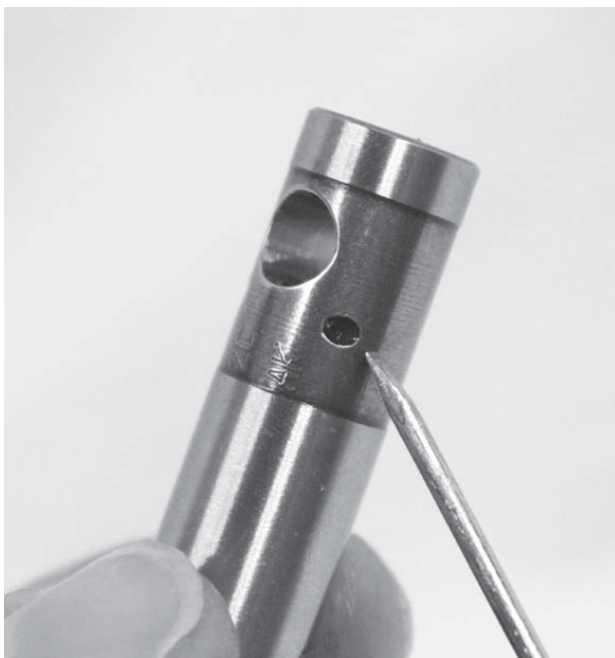
- 28.** Push out the firing pin retainer from right to left; there is a small O-ring on the head of the pin. Then pull the firing pin out from the rear of the bolt carrier.



- 29.** Pull the cam pin from the bolt and then the bolt forward out of the carrier.



- 30.** The extractor is heavily staked in place but can be driven out if the extractor or spring needs to be replaced.



- 31.** The ejector retaining pin is near the cam pin hole and can be driven out to allow the ejector and spring to be removed out of the back of the bolt.

- 32.** The charging handle is retained by a two-piece pin and should be left assembled unless it needs repair. The spring and follower reside within.



Reassembly Tips:

- 1.** This is the proper orientation of the fire control group. The trigger spring with the longest leg should be on the left and the long leg should be pointing forward to engage the bolt stop.





Howa 1500

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the Howa 1500 also apply to the following guns:

Weatherby Vanguard

Howa Axiom

Data: Howa 1500

Origin: Japan

Manufacturer: Howa Machinery, Ltd.

Cartridge: .22-250 Rem.

Magazine Capacity: 5 rounds

Overall Length: 40 inches

Barrel Length: 20 inches

Weight: 8.5 pounds

Howa of Japan makes the 1500 and imports it into the U.S. via Legacy Sports International. Howa is also the OEM manufacturer for other companies, most notably Weatherby, as the 1500 is the basis of and is virtually identical to the Vanguard. New models have three-position safeties, allowing the bolt to be opened while the rifle is safed. There are many 1500 models, including those with recoil reduction stocks. These Axiom models have spring mechanisms incorporated in the stocks to bring the felt recoil to a minimum, but other than the stocks themselves, the takedown steps for this heavy-barreled varmintier will be adequate for those models, as well. It should be noted that many 1500s are sold as barreled actions and the resulting variety of furniture and accessories should be expected. Chamberings run the gamut, with a wide range of cartridges for just about every conceivable purpose.

Disassembly:

1. Remove the bolt by opening it and then pushing down on the bolt stop button while pulling the bolt from the rear of the receiver.



2. To remove the firing pin assembly, turn the bolt shroud about 1/3 turn clockwise until the shroud springs free of the bolt body. Pull the firing pin assembly from the bolt.



3. Compress the firing pin spring until the notch at the front of the bolt shroud lines up with the hole in the center of the firing pin, under the firing pin spring. Insert a punch into this hole to keep the firing pin spring compressed.

- 4.** With the firing pin spring contained, drive out this pin at the rear of the cocking piece. When this pin is removed, the firing pin can be pulled from the cocking piece/shroud subassembly. Removal of the retaining punch will allow the firing pin spring to separate from the firing pin (the spring should be firmly controlled).



- 5.** Remove the extractor and its spring by pushing out this pin.

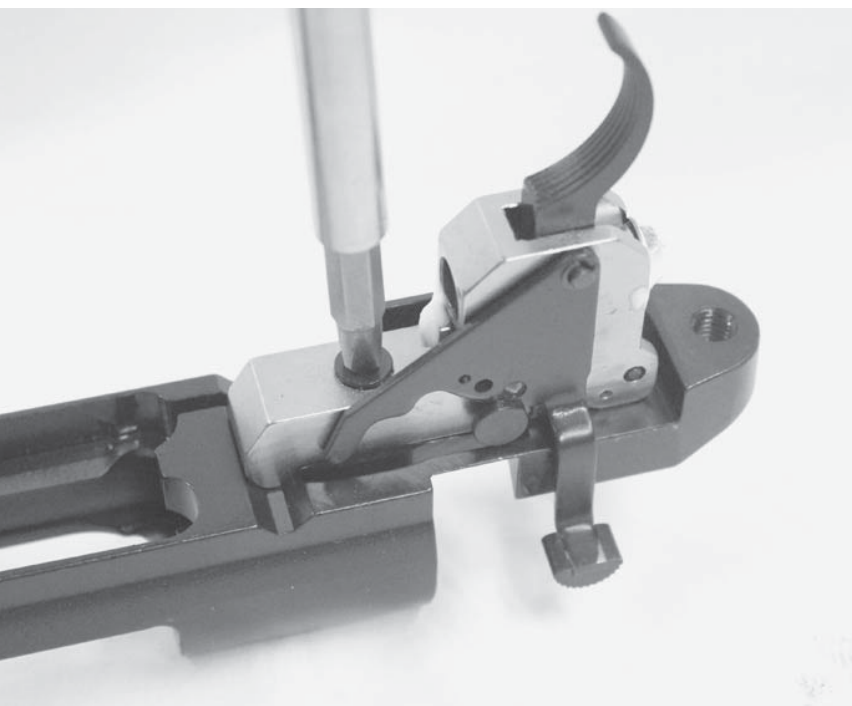


- 6.** The ejector and spring can be removed by driving out this pin.

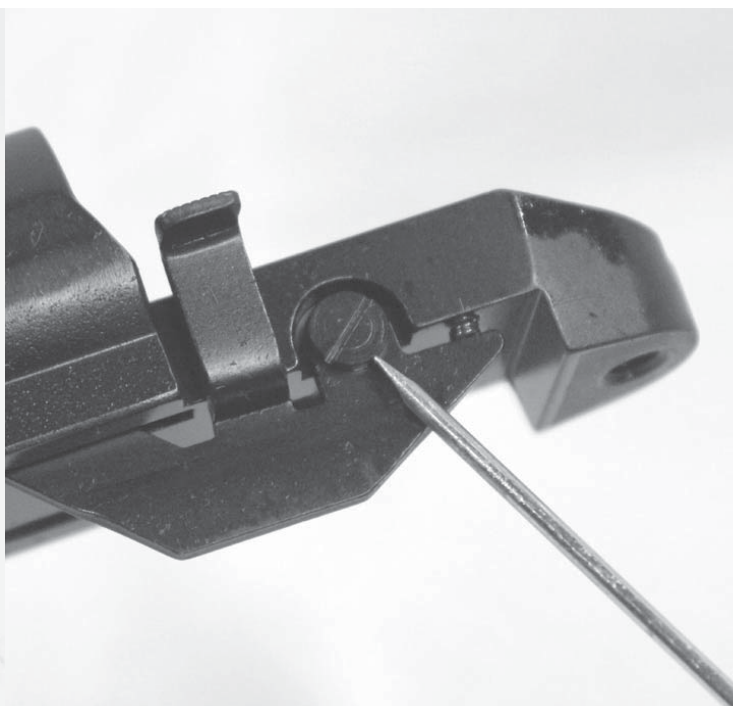


- 7.** Separate the action from the stock by removing the two action screws in the triggerguard assembly. When this happens, the magazine box and triggerguard assembly will fall free.

- 8.** Removing this Phillips screw will allow the trigger housing to be removed from the receiver.



- 9.** The bolt stop is held to the receiver by this screw. The small bolt stop spring is positioned at the rear of the bolt stop.

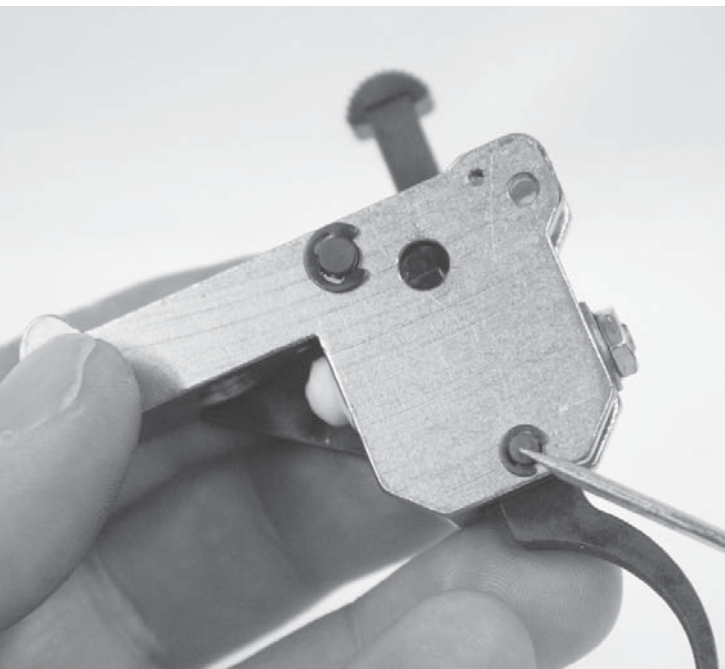


- 10.** Drive out this small spring pin that serves as a sear stop.

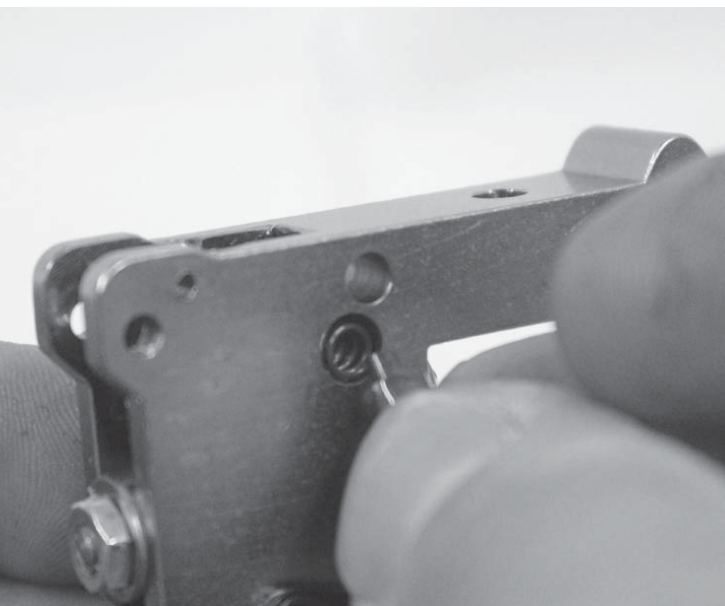
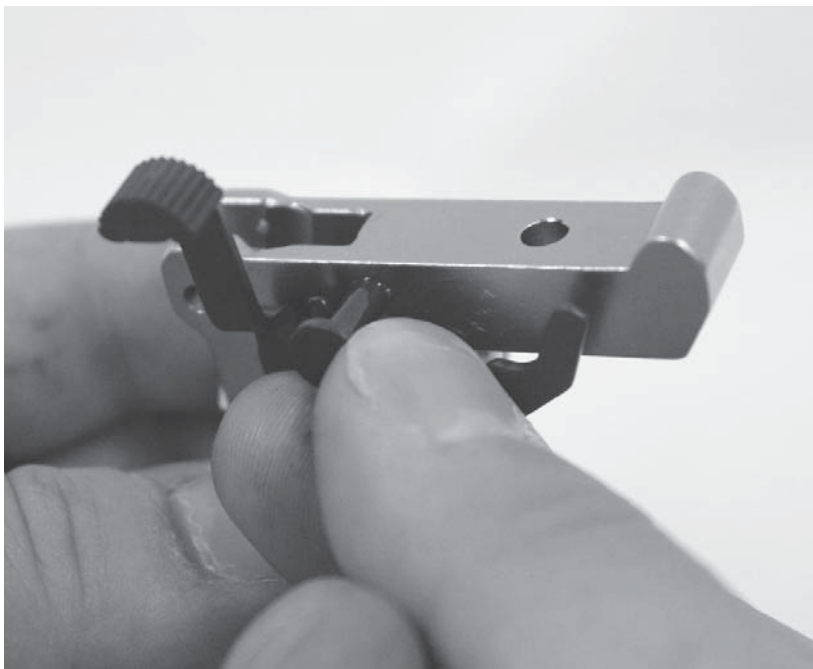


- 11.** Push out the sear pivot pin and remove the sear from the housing from right to left. The large sear spring below the sear can also be removed.

- 12.** Remove the two E-clips from the left side of the trigger housing.



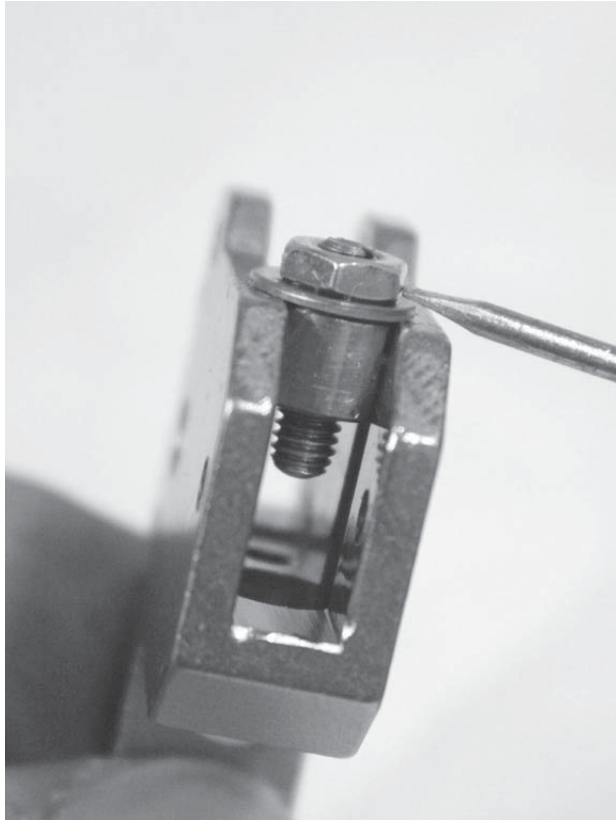
- 13.** Pull the safety stop pin from the right side of the housing.



- 14.** Remove the safety detent and spring.



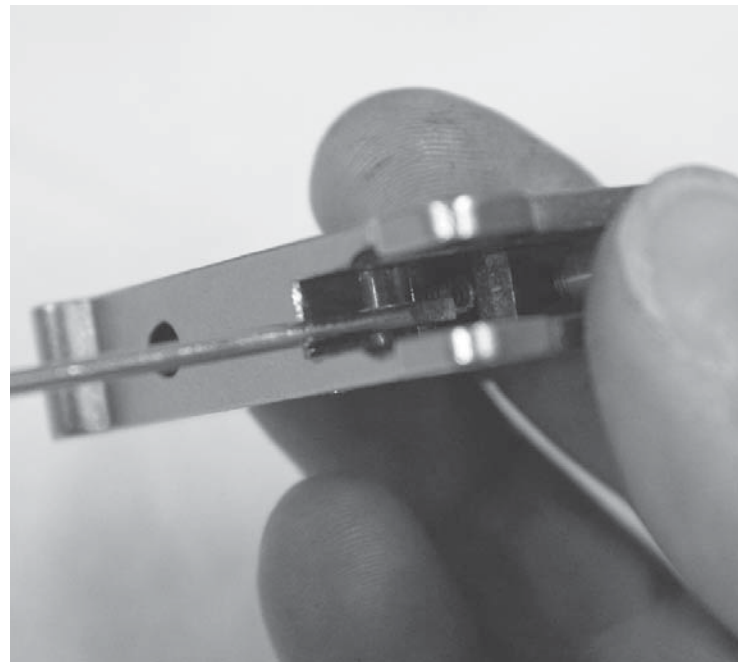
- 15.** Pull out the trigger pin. This will free the trigger and the safety lever. The trigger can be pulled from the bottom of the housing. The trigger return spring will likely remain in the housing, but can be shaken out of its seat or removed through its seat hole if the trigger adjustment screw in the front of the housing is removed.



- 16.** This rear subassembly contains the sear engagement screw, the screw block, a nut, and a washer. This group of small parts should be left in the housing. If repair is necessary, remove the screw, nut, and washer, and the block will exit through the front of the housing.

Reassembly Tips:

- 1.** The easiest way to place the trigger spring, without modifying the weight setting by removing the weight adjustment screw, is to insert the spring in its hole with needlenose pliers, then insert the trigger from below. Use a small screwdriver to slightly compress the spring to allow the trigger to clear.



Italian Carcano Model 1891 Carbine

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Italian Carcano Model 1891 also apply to the following guns:

Italian Model 1891 Rifle
Italian Model 1891/24 Carbine
Italian Model 1938 Rifle
Italian Model 1938 TS Carbine

Italian Model 1891 TS Carbine
Italian Model 1891/38 Rifle
Italian Model 1938 Carbine
Italian Model 1941 Rifle

Data: Italian Carcano
Model 1891 Carbine

Origin: Italy

Manufacturers: Beretta, Terni arsenal,
and other
government facilities

Cartridge: 6.5x52mm
Mannlicher-Carcano

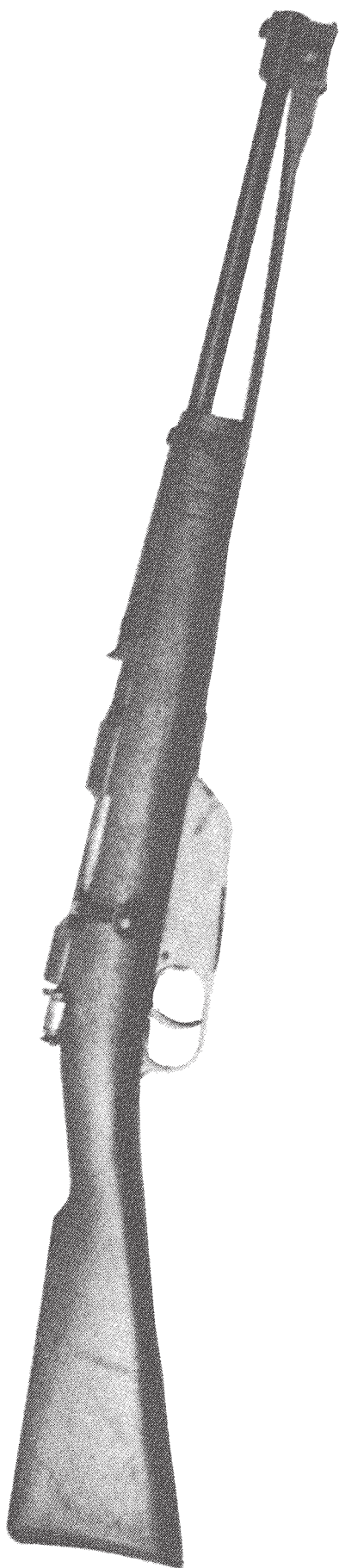
Magazine capacity: 6 rounds

Overall length: 36.2 inches

Barrel length: 17.7 inches

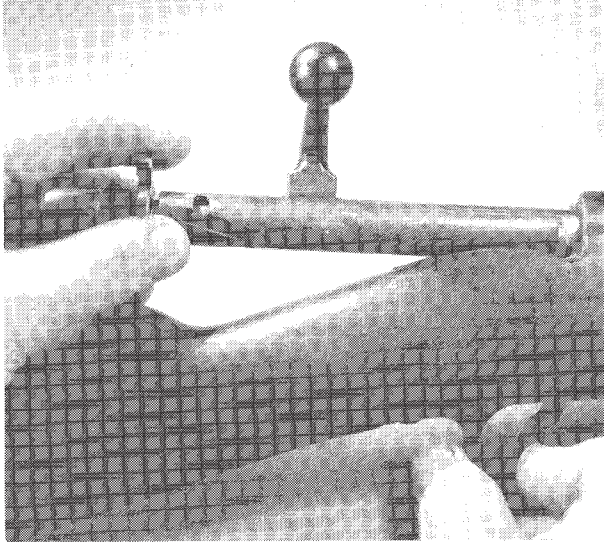
Weight: 6.6 pounds

The 6.5mm Mannlicher-Carcano was used by Italian military forces from 1892 through World War II, in rifle and carbine versions. A new 7.35mm cartridge was introduced in 1938, along with a shortened rifle and two carbines. All of these used the original Carcano action, and the instructions will apply.

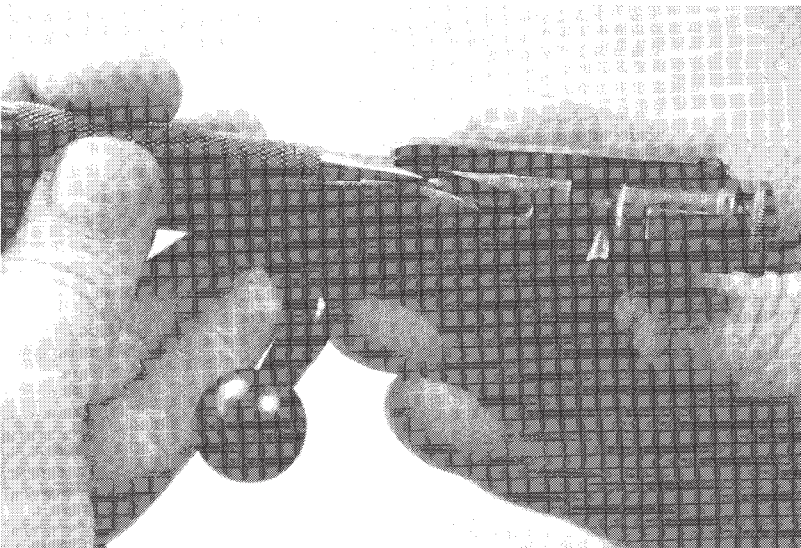
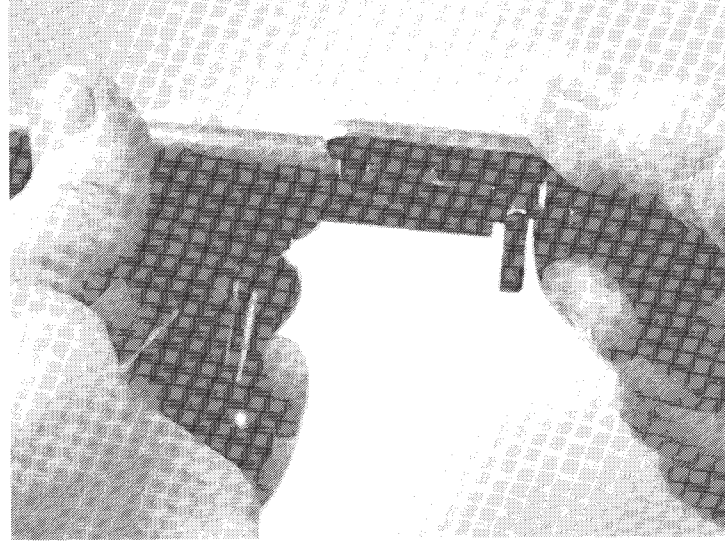


Disassembly:

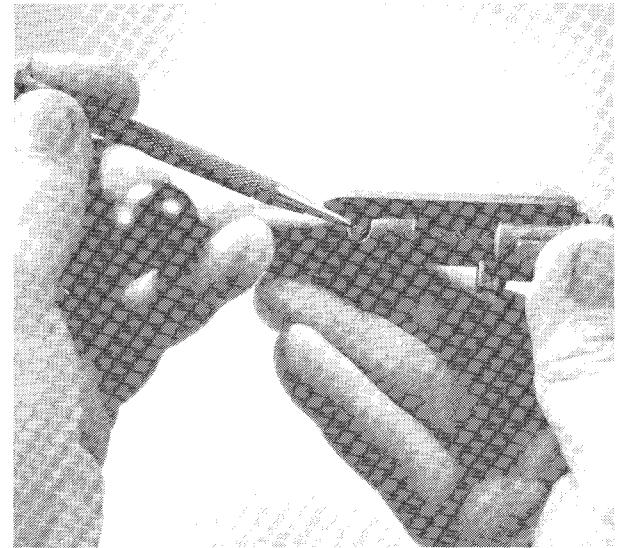
1. Open the bolt, hold the trigger fully to the rear, and remove the bolt rearward.



2. Turn the bolt headpiece counter-clockwise (rear view), lowering the striker to fired position.

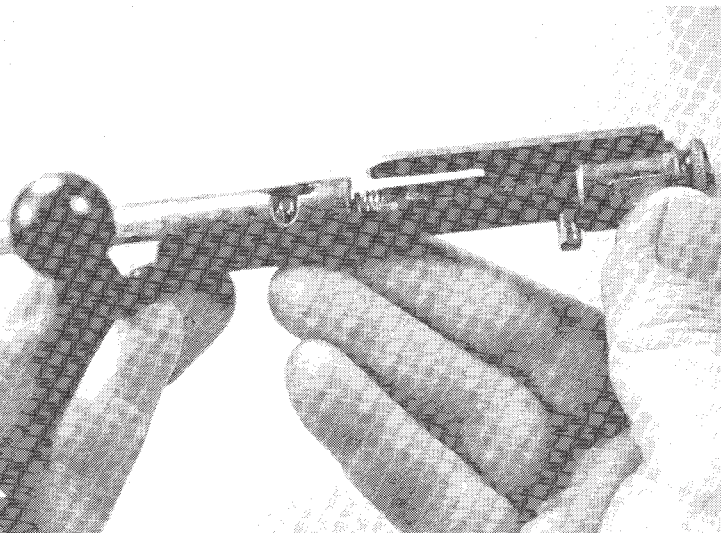


3. Press the safety forward, against the spring tension, and turn it counter-clockwise (rear view), bringing the small lug on its shaft into the open angled track in the bolt body.

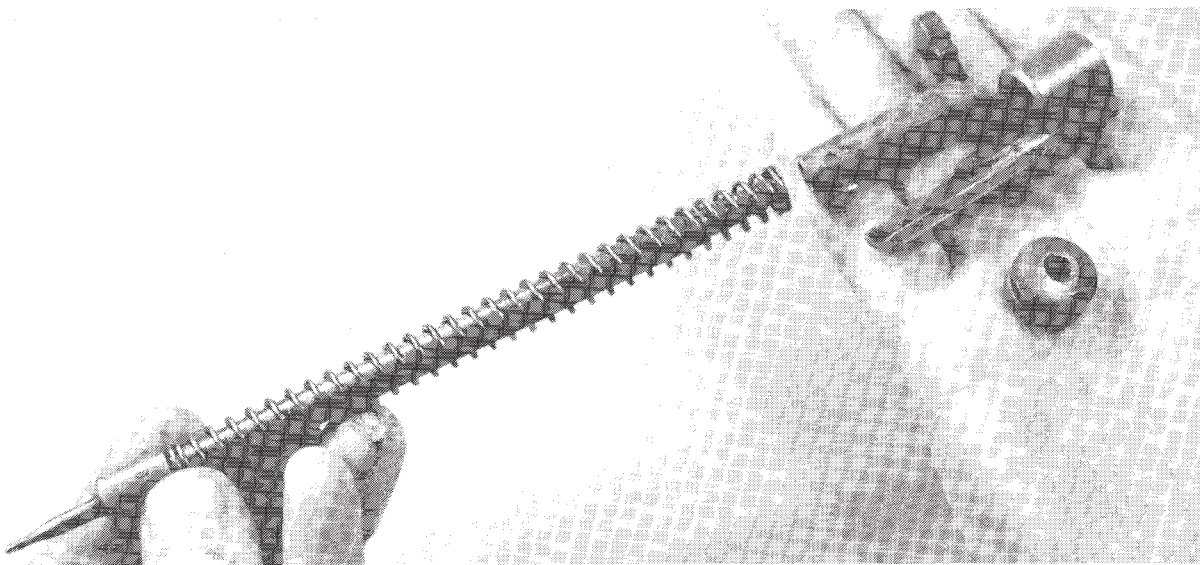
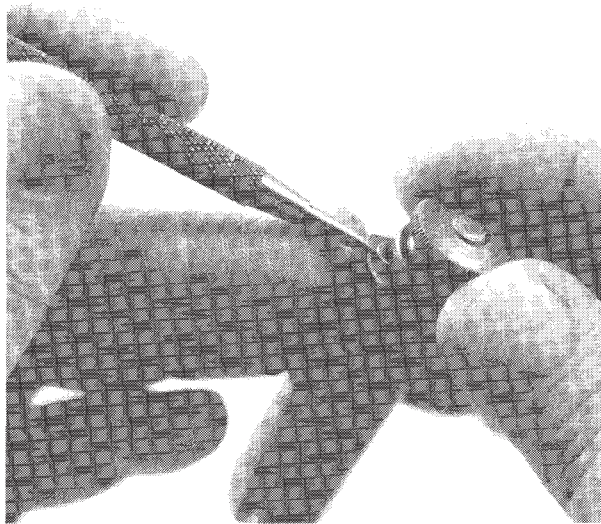


4. Move the striker assembled rearward, and turn the small lug into the recess near the end of the angled track, as shown.

- 5.** Remove the striker assembly toward the rear.

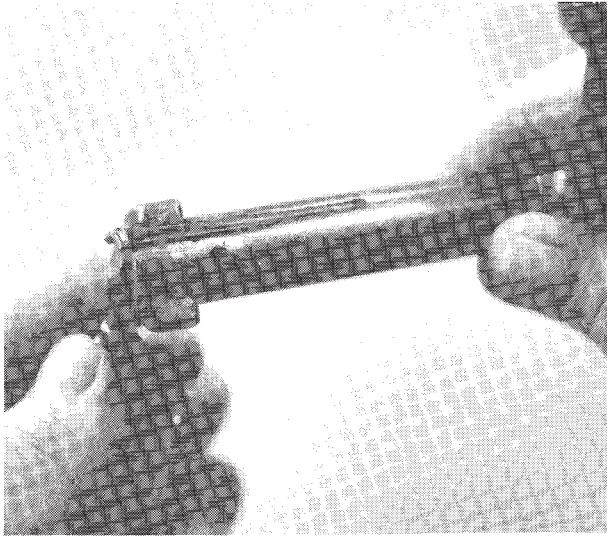


- 6.** Depress the lock plunger beside the striker knob, and unscrew the knob from the shaft of the striker. For this operation, grip the front portion of the striker in a padded vise.

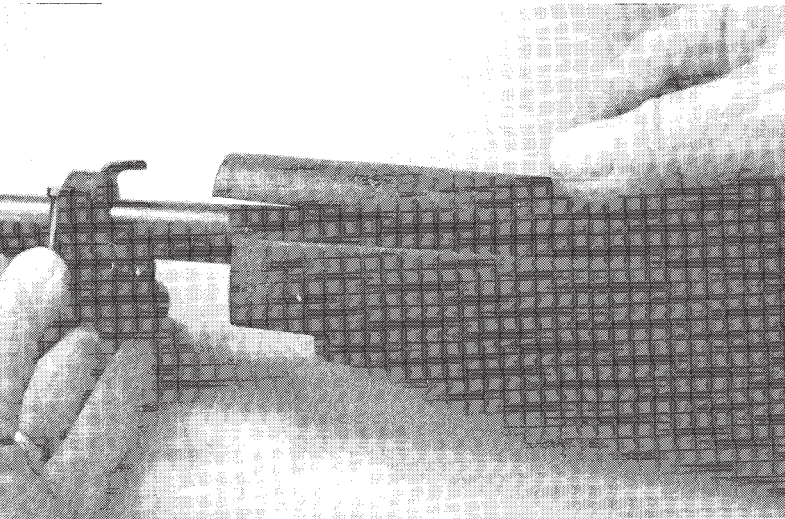
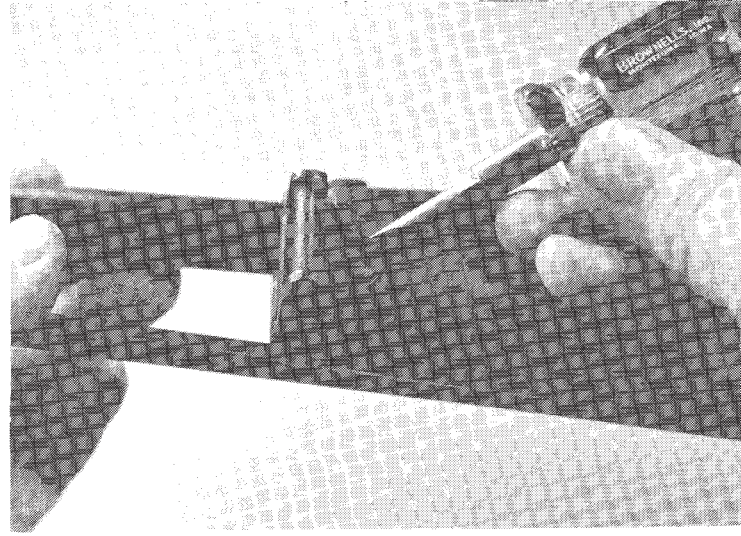


- 7.** Using the safety as a restraint, release the spring tension slowly. Remove the knob, endpiece, safety, and spring from the striker shaft.

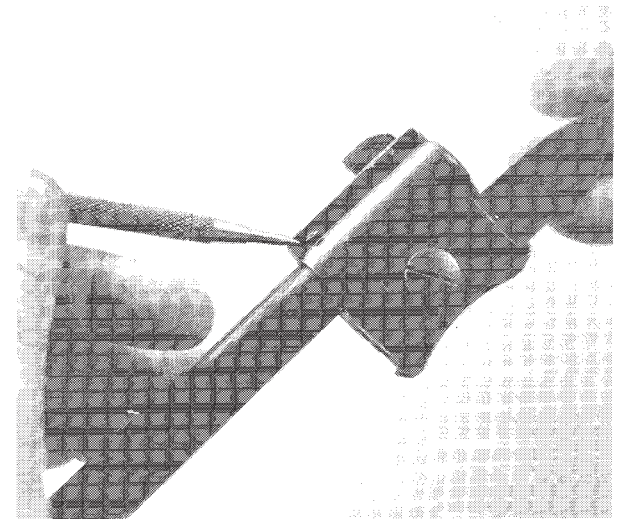
- 8.** With a screwdriver under the extractor beak, lift the front of the extractor just enough to clear its retaining lug, and slide it out toward the front. Avoid flexing it too far.



- 9.** If the gun is a full-length rifle, the first step in removing the action from the stock is to take off the front end piece and the barrel band. The end piece is retained by a cross screw, and the barrel band by a bar spring-latch. In the carbine shown here, remove the cross screw in the stock end piece.

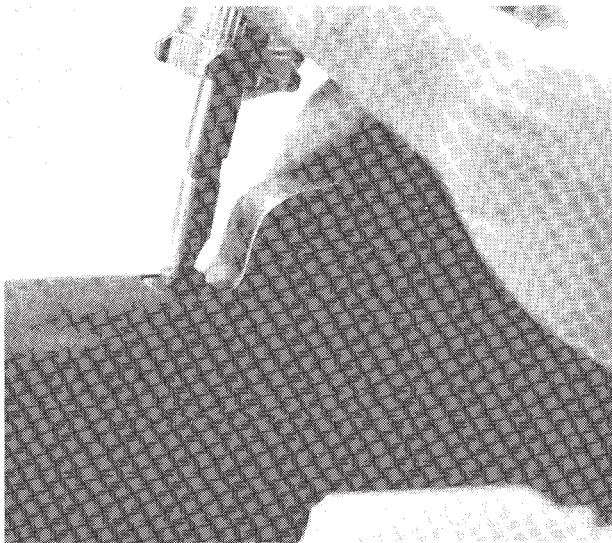


- 10.** Move the end piece off toward the front, and move the top handguard forward and upward for removal. If full removal of the end piece is necessary, the bayonet mount must be taken off.

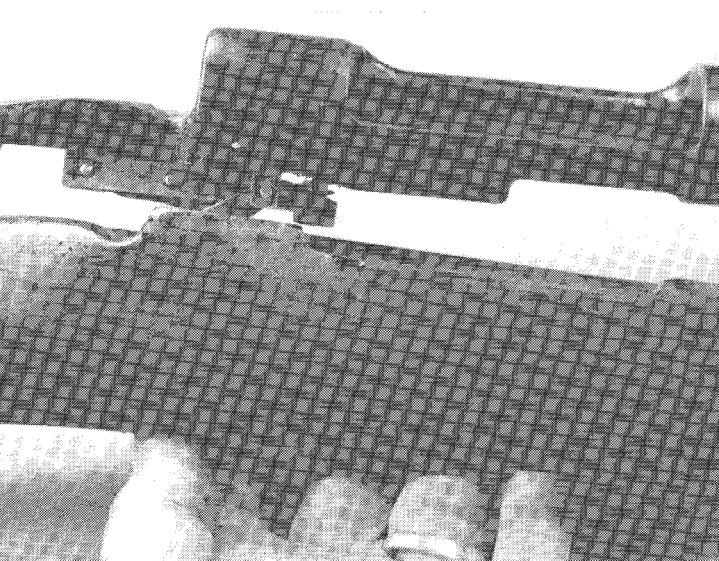
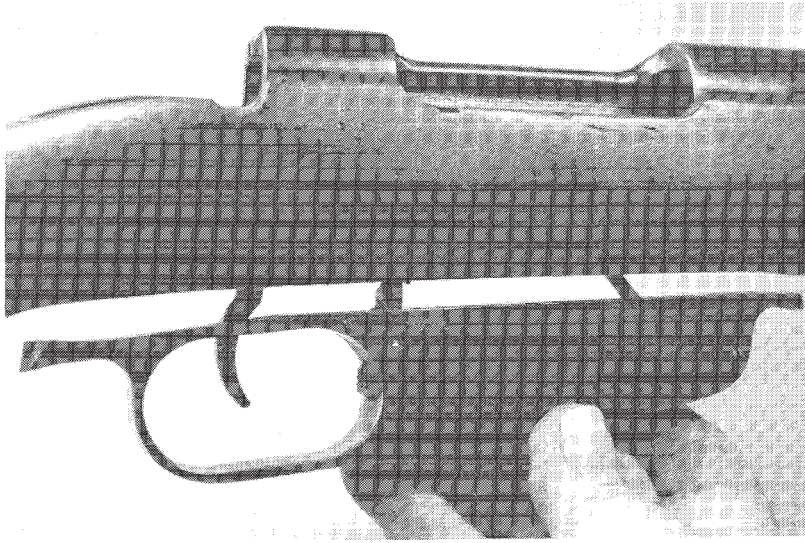


- 11.** Removal of the bayonet mount requires a wide screwdriver with a thin blade, and a shop-made twin-point wrench. This system is usually staked in place, and removal may be difficult. Taking off the entire sight base and bayonet unit requires removal of a small cross screw at upper rear. If the front sight along is being taken off, it can be drifted out of its dovetail mount.

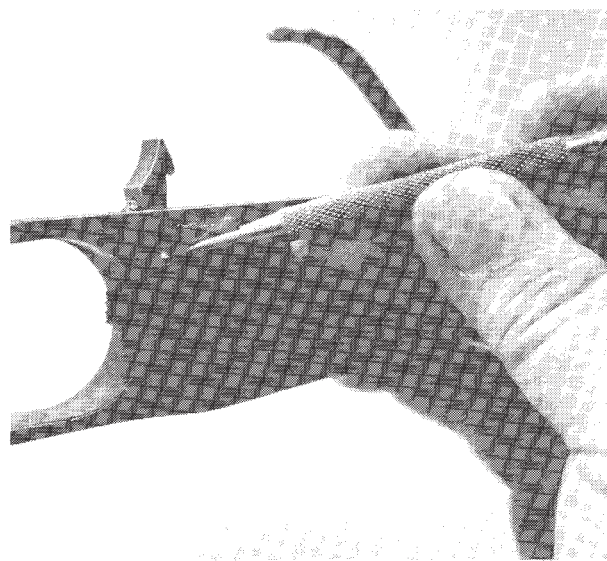
- 12.** Remove the vertical screws at the front and rear of the combination magazine and trigger guard unit.



- 13.** Remove the magazine/guard unit downward.

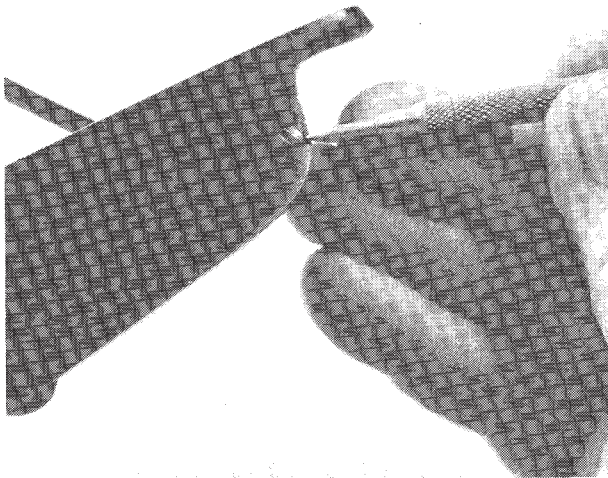


- 14.** Remove the action from the stock.

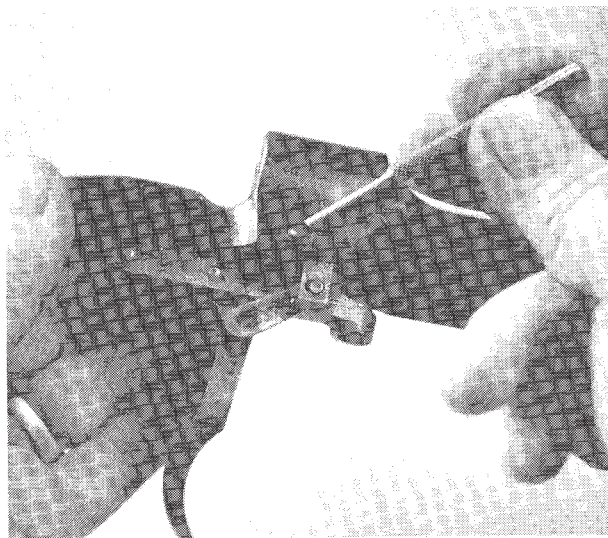
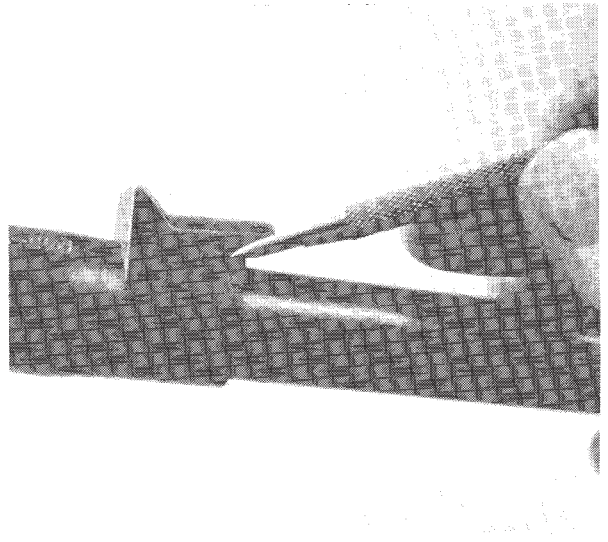


- 15.** The clip latch is pivoted and retained by a small cross screw. The latch and its spring are taken out toward the front.

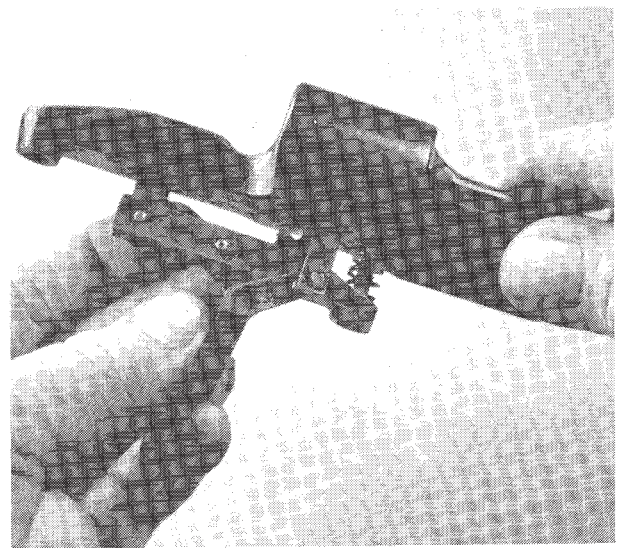
- 16.** The magazine follower arm is mounted on a subframe that can be taken out of the housing by removal of this screw. The arm is powered by a strong spring, and it is retained in the sub-frame by a cross pin. Depress the spring while pushing out the pin.



- 17.** The rear sight unit is retained on the barrel by a cross screw. After the screw is taken out, the unit can be driven off toward the front. (Full removal is possible only if the bayonet base has been taken off.)

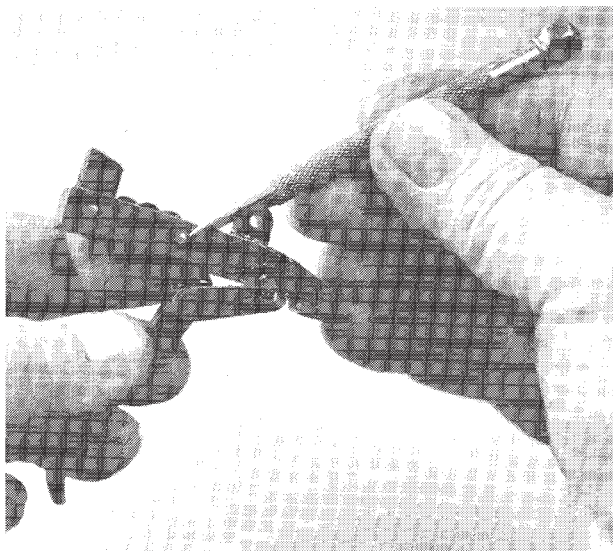


- 18.** The trigger, sear, and bolt stop assembly is retained on the underside of the receiver by a cross pin with a large head on the left side. Push the pin out toward the left.

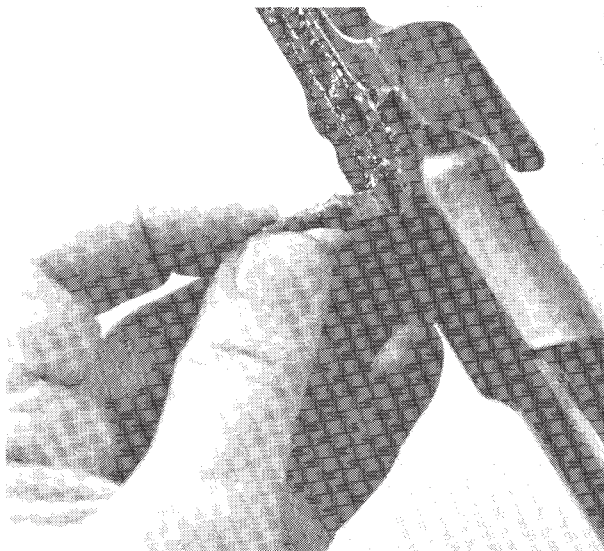


- 19.** Remove the trigger, sear, and bolt stop assembly downward.

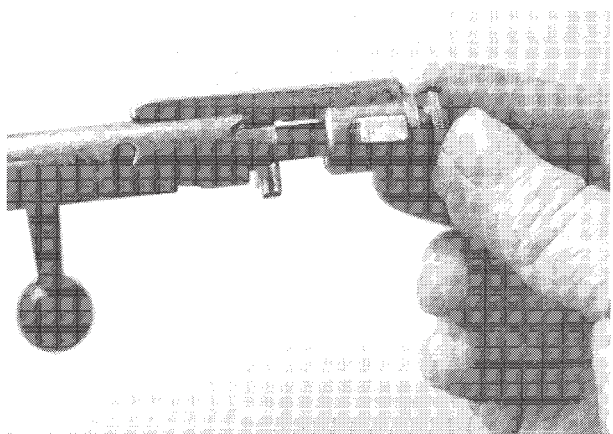
- 20.** The trigger can be separated from the sear by drifting out the center pin. The bolt stop is easily lifted off its post. The rear cross pin in the sear allows separate replacement of the striker contact beak of the sear. In this photo, the bolt stop and the sear spring have been removed.



- 21.** After removal of the trigger-sear assembly, the ejector is easily taken out of its recess in the underside of the receiver.



Reassembly Tips:



- 1.** Before the bolt can be reinserted in the receiver, the striker must be in cocked position, as shown.



Japanese Arisaka Type 99

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Japanese Arisaka Type 99 also apply to the following guns:

Japanese Type 30 Rifle
Japanese Type 44 Carbine

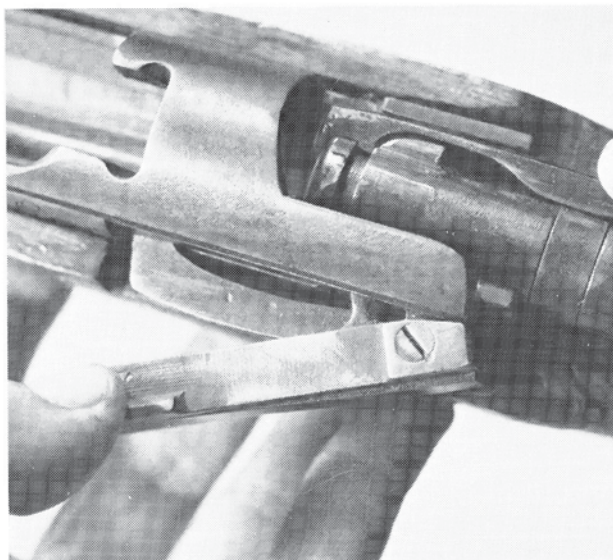
Japanese Type 38 (Model 1905)
Japanese Type 97 Sniper

Data:	Japanese Arisaka Type 99
Origin:	Japan
Manufacturer:	Tokyo Arsenal, Nagoya Arsenal
Cartridges	7.7mm Japanese
Magazine Capacity:	5 rounds
Overall length:	50 inches (short version, 43.9 inches)
Barrel length:	31.4 inches (short version, 25.8 inches)
Weight:	9.1 pounds (short version, 8.6 pounds)

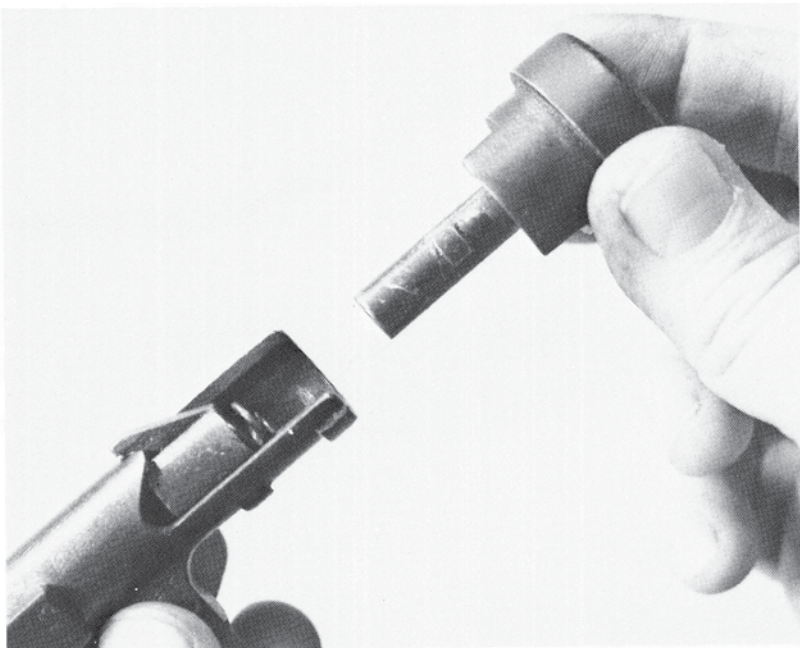
Although the early Type 38 rifle is occasionally seen in the U.S., the one most familiar to American shooters and collectors is the Type 99, adopted in 1939. The Type 99 is a modified Mauser design, and is one of the strongest actions ever made. Late war-time guns, though, are often of dubious quality in both materials and fitting. Early well-made guns were once popular for conversion into sporting rifles. There are several small mechanical differences between the Type 38 and Type 99 rifles, especially in the bolt stop/ejector system, but these should cause no difficulty in takedown.

Disassembly:

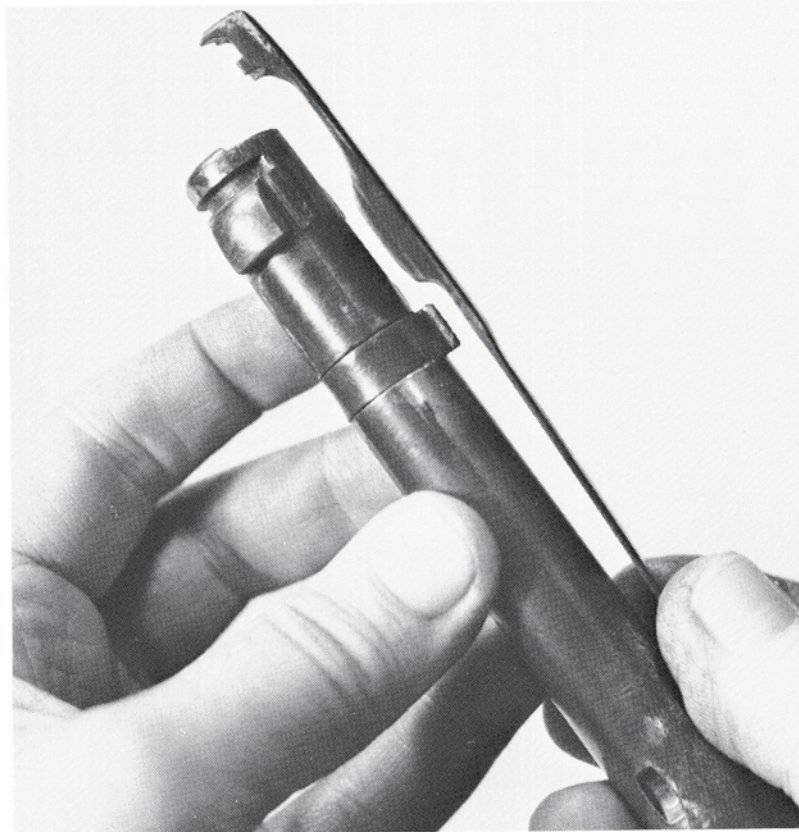
1. To remove the bolt, open it and move it to the rear. Pivot the bolt stop out toward the left, and withdraw the bolt from the rear of the receiver.



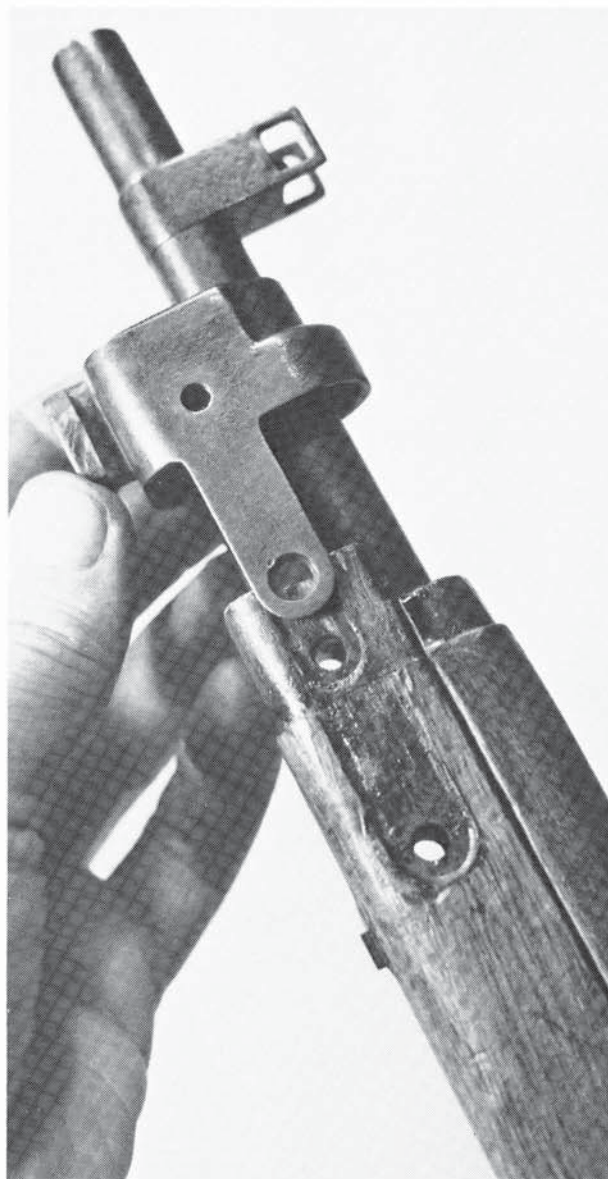
2. To remove the combination safety and bolt end piece, grip the bolt firmly, and push the safety knob toward the front until it stops. Then, turn it counter-clockwise (rear view) until it stops, and let it move toward the rear, slowly easing the tension of the striker spring. Remove the safety knob toward the rear.



3. Remove the striker and its internal spring toward the rear.
4. Rotate the extractor on its collar until its front underlug is out of its groove, and push it off toward the front, disengaging its T-slot from the mounting flanges on the ring. Removal of the ring from the bolt is not advisable in normal takedown.

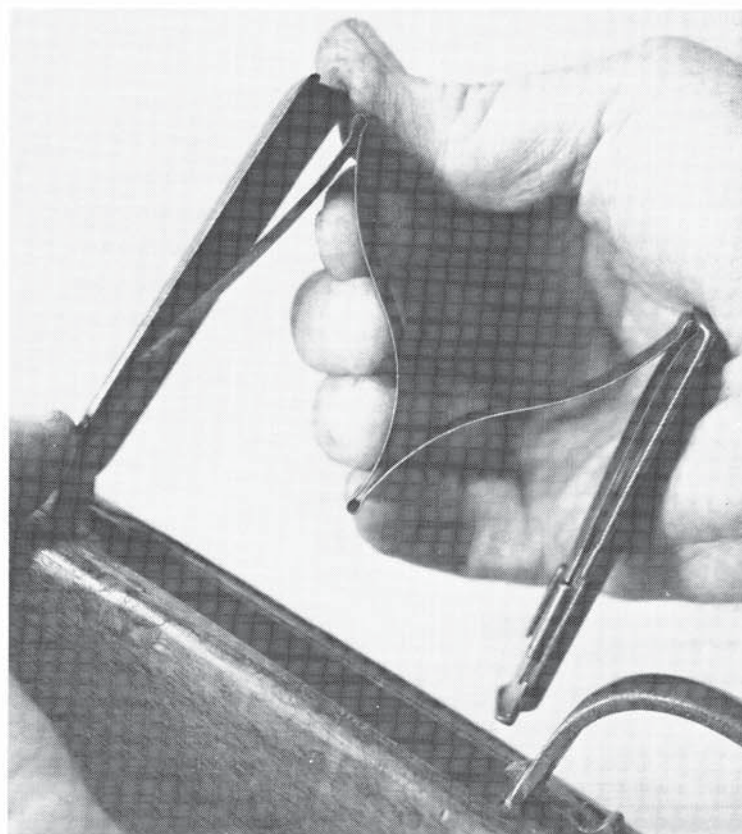
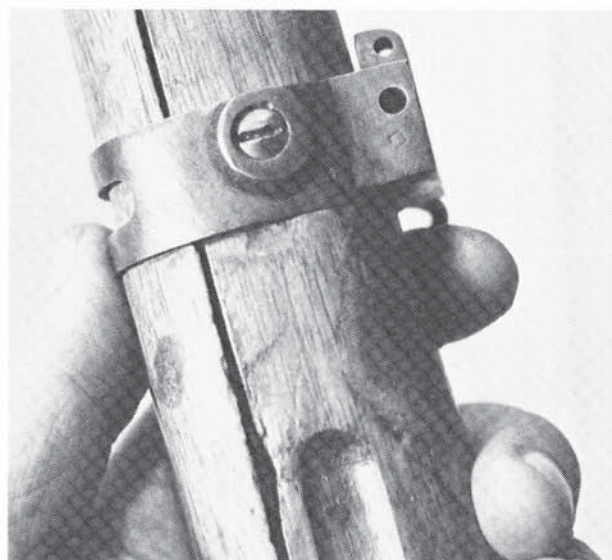


- 5.** Remove the large cross screw in the front barrel band, and the two side screws in the rear tabs of the band. Slide the band forward off the front of the stock.

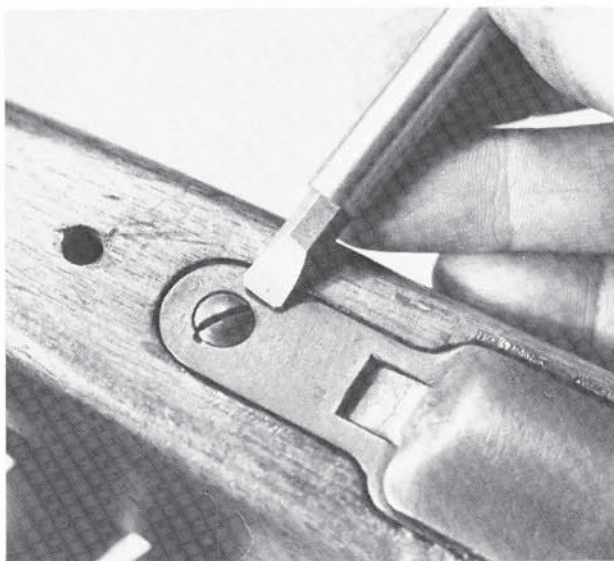


- 7.** Operate the magazine floorplate latch to release the floorplate, and slide the magazine spring out of its recess in the floorplate. The follower can be taken off the top of the spring in the same way. Reclose the floorplate.

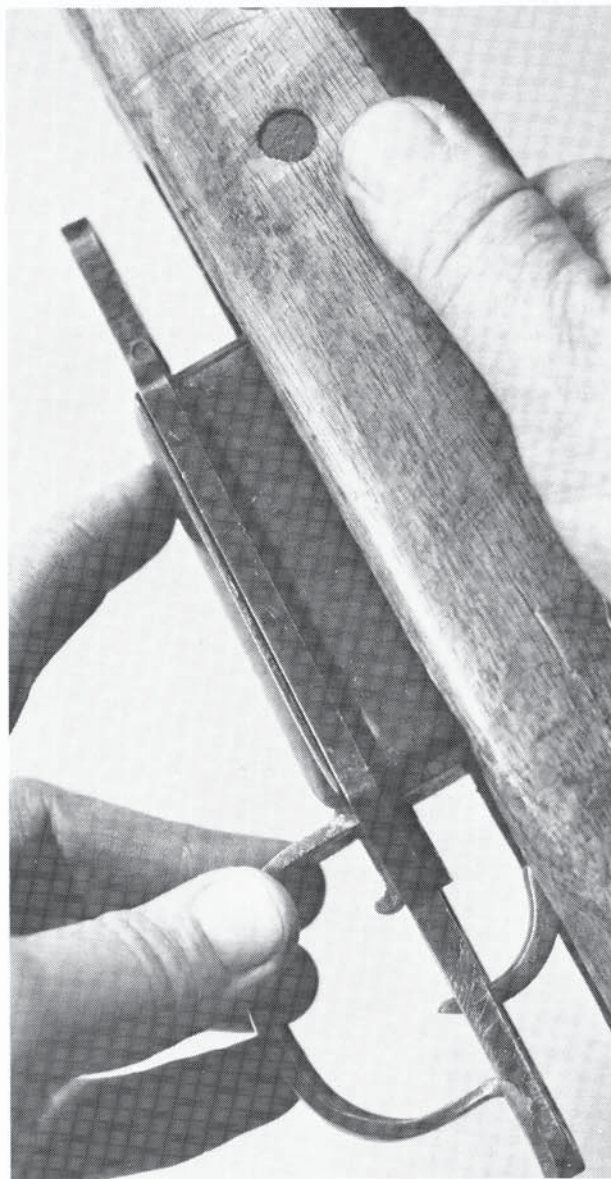
- 6.** Remove the cross screw in the rear barrel band, and slide it forward off the stock. Move the upper handguard wood forward, then lift it off the top of the barrel.



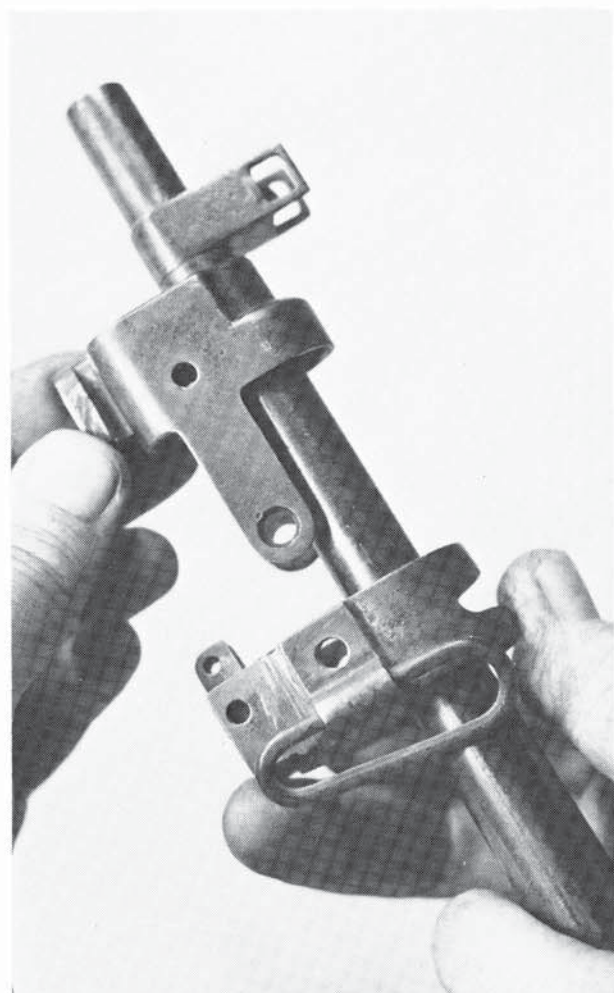
- 8.** Remove the three vertical screws on the underside, located in front of the magazine floorplate, behind the trigger guard, and at the end of the lower tang.



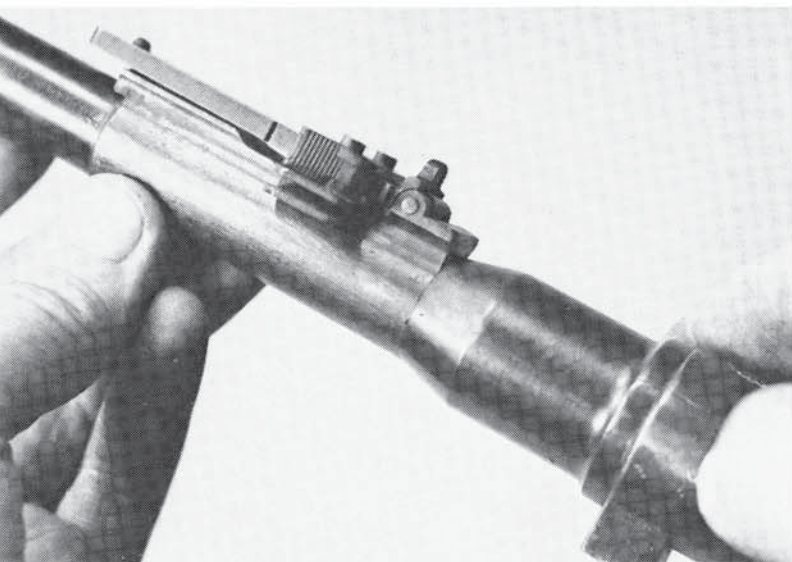
- 9.** Remove the trigger guard/magazine housing unit downward, and take off the action upward. The upper tang piece can also be lifted out upward, separately.



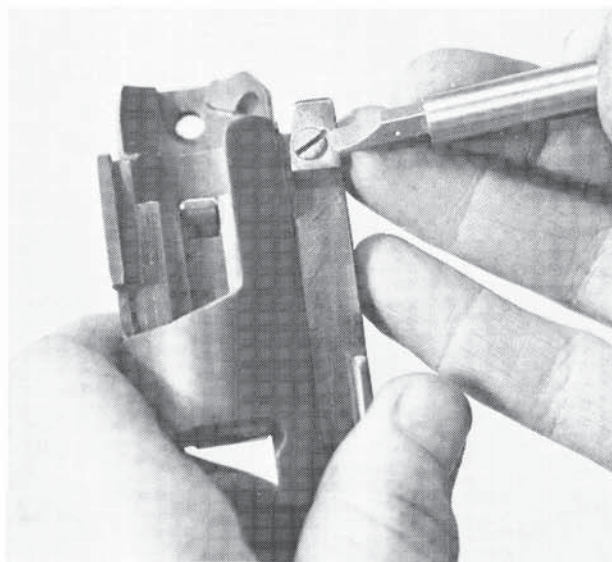
- 10.** Removal of the barrel bands from the barrel requires that the front sight be taken off, and this is not advisable in normal takedown.



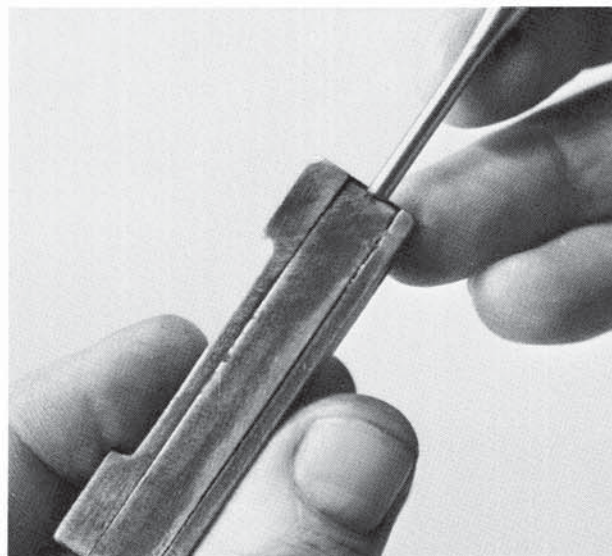
- 11.** The rear sight can be removed from its base by drifting out the cross pin at the rear of the sight, but the base is not removable in normal takedown.



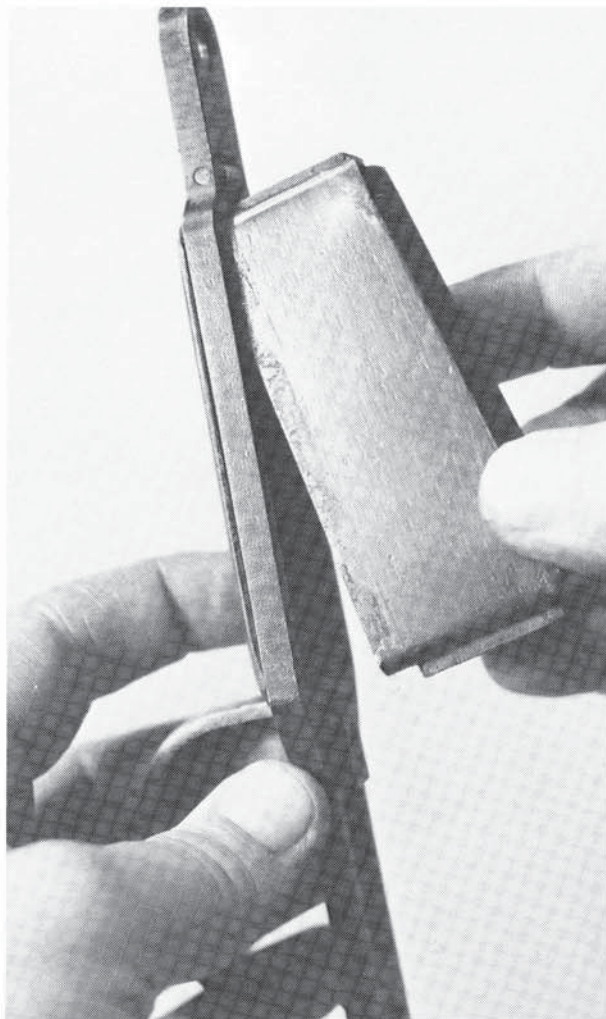
- 12.** To remove the bolt stop/ejector assembly, take out the vertical screw at its rear, and remove the assembly toward the left.



- 13.** The ejector can be pulled out of the bolt stop toward the front.

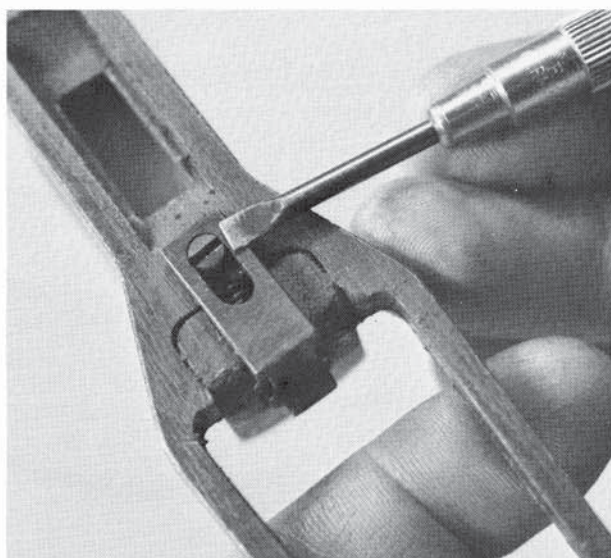
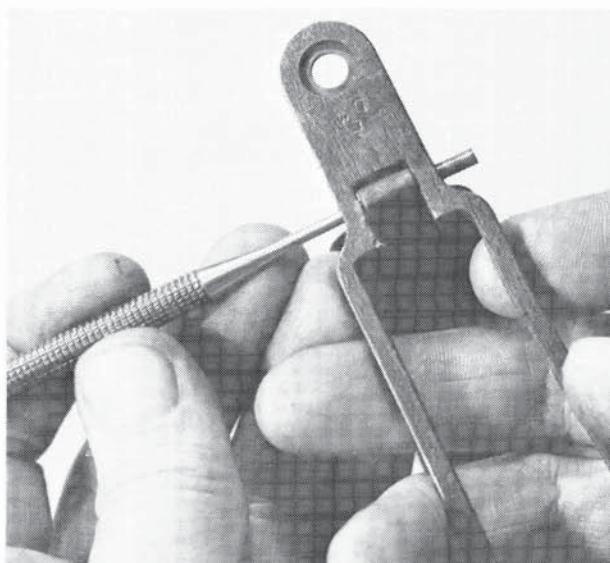


- 14.** To remove the combination bolt stop and ejector spring, place a small drift punch against its rear edge and use a small hammer to tap it toward the front. When the rear tip of the spring has cleared the cross piece at the rear of the bolt stop, it will drop inside. If necessary, insert a small screwdriver to lever it forward until it can be grasped at the front and taken out.

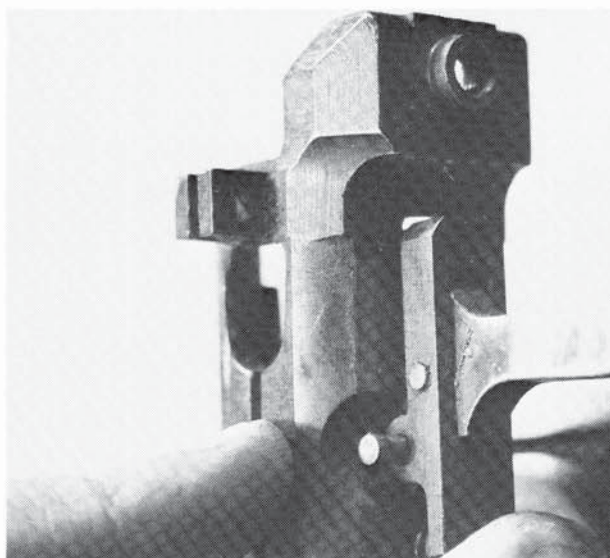


- 15.** The magazine box is a press fit in the guard unit, and is easily worked loose and lifted out

- 16.** Pushing out the cross pin at the front of the magazine floorplate, the hinge pin, will release the plate for removal.

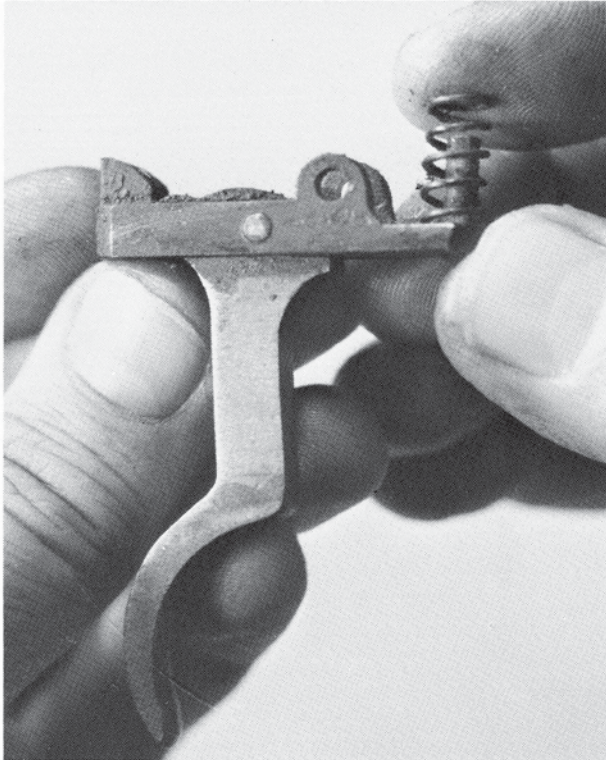


- 17.** A vertical screw on the inside of the guard unit retains the magazine floorplate latch and its spring. After the screw is taken out, the latch and spring are removed toward the front.



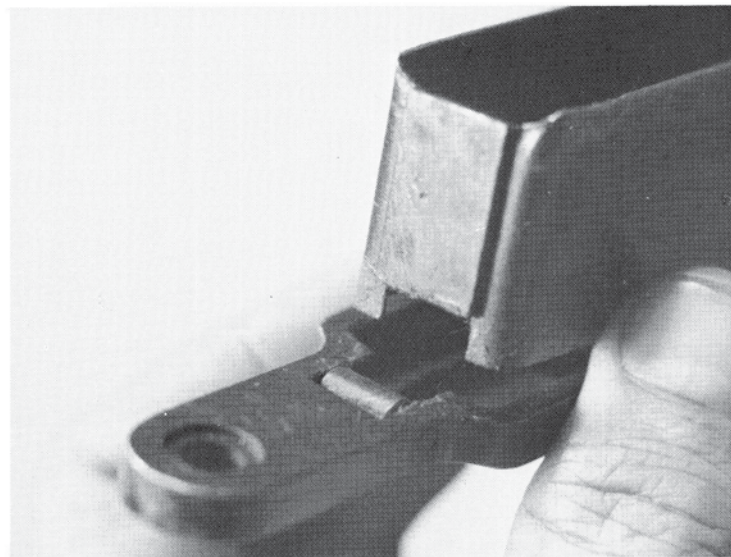
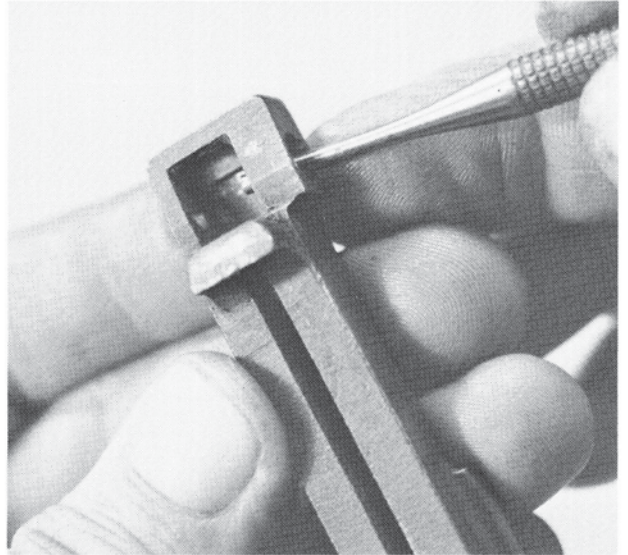
- 18.** The trigger/sear assembly is retained on the underside of the receiver by a cross pin. Exerting pressure on the front of the sear to slightly compress the spring will make removal of the pin easier. The sear, trigger and spring are removed downward.

- 19.** Drifting out the cross pin at the top of the trigger will allow separation of the sear and trigger.



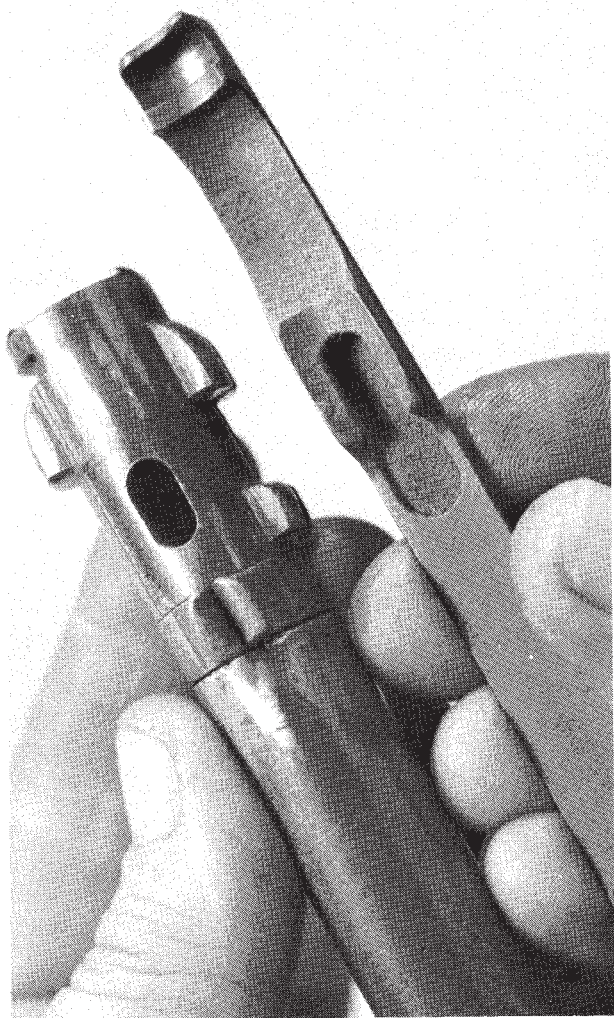
Reassembly Tips:

- 1.** After the combination bolt stop and ejector spring is inserted in the bolt stop, its rear tip will stop against the rear cross bar of the stop. Insert a small drift punch or screwdriver through the upper hole in the bolt stop, to bear against the inner shelf of the spring tip, lifting it onto the bar and levering it toward the rear. The spring can then be tapped into place from the front.

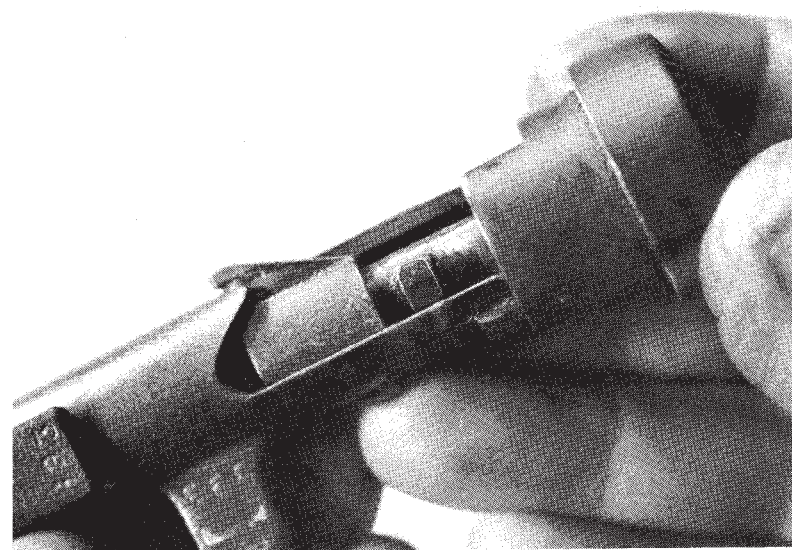
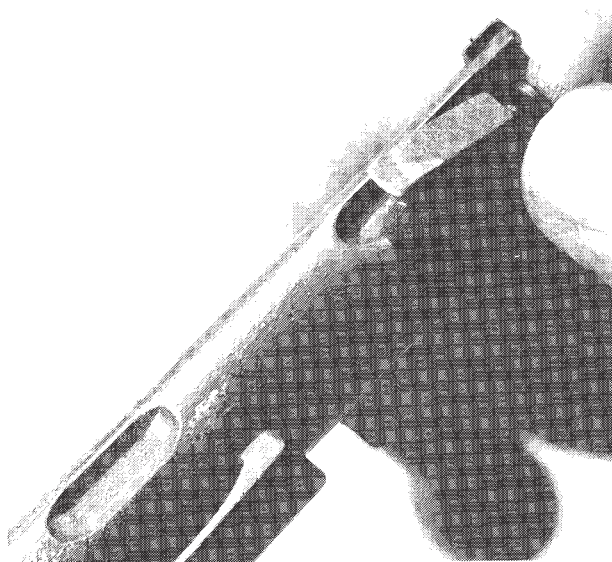


- 2.** When replacing the magazine housing in its recess on top of the guard unit, note that the rectangular cut at the front goes at the bottom, next to the unit, to give clearance for the floorplate hinge.

- 3.** When replacing the extractor on the bolt, turn the mounting ring so its upper projections are aligned with the oblong vent hole in the bolt. This will bring the ungrooved area at the front of the bolt in line for reattachment of the extractor. As the extractor is slid back onto the mounting ring, its front underlug will be stopped by the front edge of the bolt, and it must be lifted slightly at the front to clear. After the extractor is fully to the rear, turn it back until the front underlug enters the retaining groove.



- 4.** When replacing the striker and its spring in the bolt, be sure the underlug of the striker is in the cocked detent, as shown, to allow replacement of the safety knob.



- 5.** When replacing the safety knob, it must be aligned so the lug on its front shaft will enter the inside track on the striker, as shown.



JRC

Data: JRC

Origin: United States

Manufacturer: Just Right Carbines, LLC, Canandaigua, NY

Cartridge: .45 ACP, .40 S&W, 9mm Luger.

Magazine Capacity: 13 rounds

Overall Length: 33.5 inches

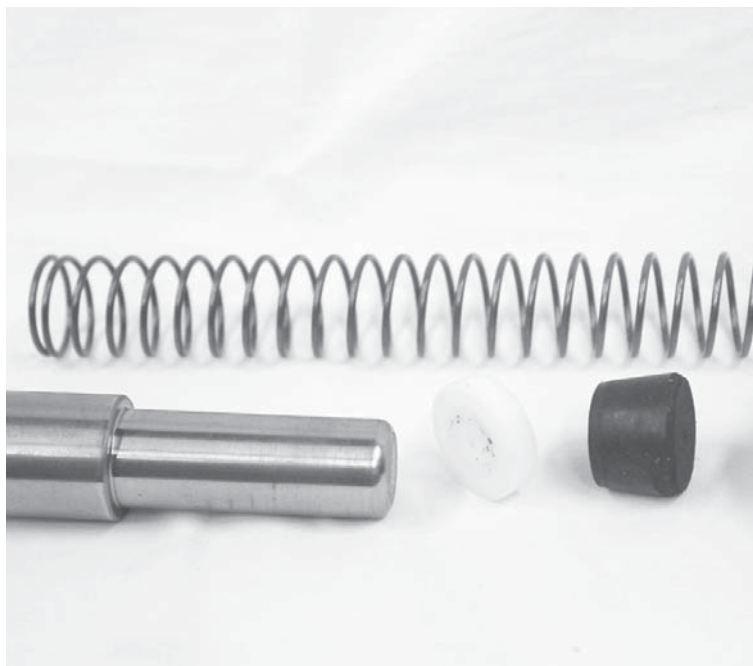
Barrel Length: 16 ¼ inches

Weight: 6.5 pounds

The JRC (Just Right Carbine) is a new pistol-caliber addition to the fun gun lineup. It intentionally bears a hefty resemblance to the AR series of rifles and can share a number of off-the-shelf parts such as handguards, stock, fire control, and magazines, keeping the price low and allowing access to a cornucopia of upgrades. It is available in several pistol calibers that can all be interchanged within the same rifle.

Disassembly:

1. Pull down on the buttstock lever and remove the stock from the extension tube by pulling it off the back.

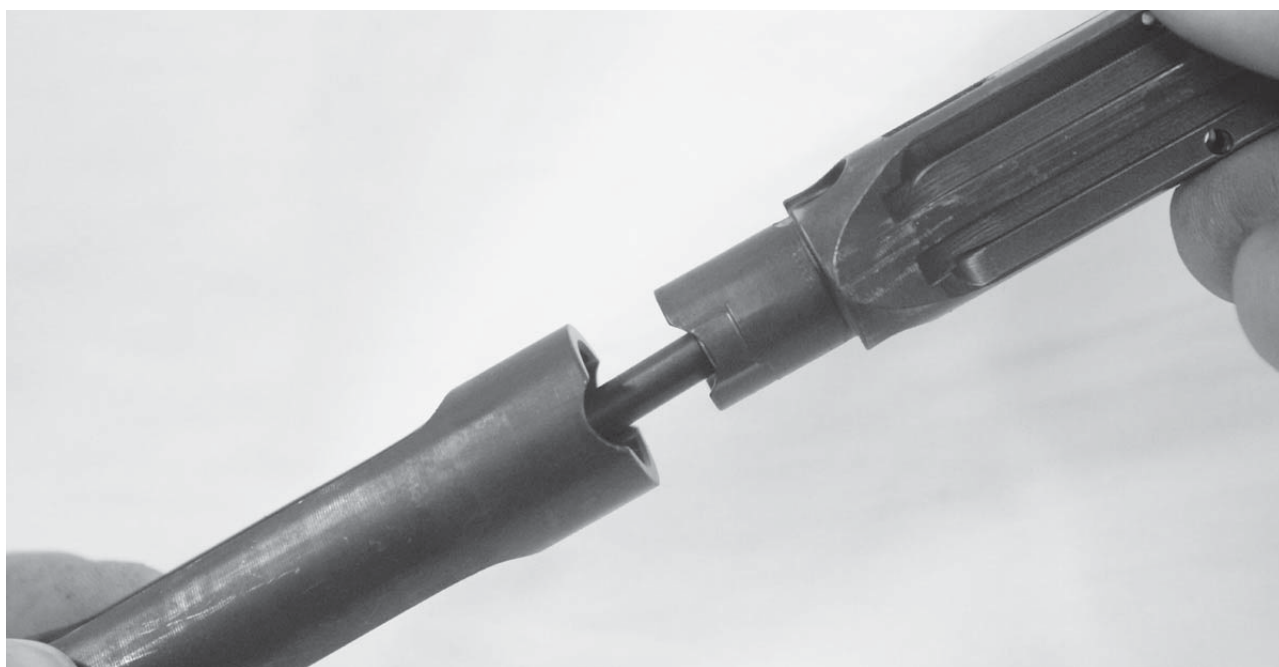


2. Using an M4 stock wrench, loosen the castle nut at the front of the extension (picture 1), then pull back the receiver plate. Unscrew the extension from the receiver. Inside the extension tube are a buffer, buffer spring, a disk, and a bumper (picture 2). Note the order in which they are removed. The spring is somewhat compressed, so be prepared.

- 3.** Pull the bolt all the way to the rear until it stops, then use a hex key to remove the charging handle. When the screw is removed, pull the handle out to the side.



- 4.** Pull the bolt all the way out of the receiver.



- 5.** Rotate the bolt head 90 degrees in either direction. This will free the bolt head for removal.

- 6.** The firing pin, firing pin spring, and a firing pin retainer reside inside the bolt and will come out when the bolt head is removed.



- 7.** The extractor can be removed for repair or reversal to the other side of the bolt by removing this spring pin.



- 8.** Remove the three hex-head screws on the right side of the receiver, two above the trigger (one in front of it and one behind) and the other at the top forward corner of the magazine well.

- 9.** Separate the upper receiver from the lower receiver. The magazine well, once its screw is removed, will fall free when the upper receiver is separated.



- 10.** The feed ramp is retained by this screw. Do not remove it unless it needs to be replaced.



- 11.** The magazine catch can be removed by depressing the button until it stops and then unscrewing the catch from the button.

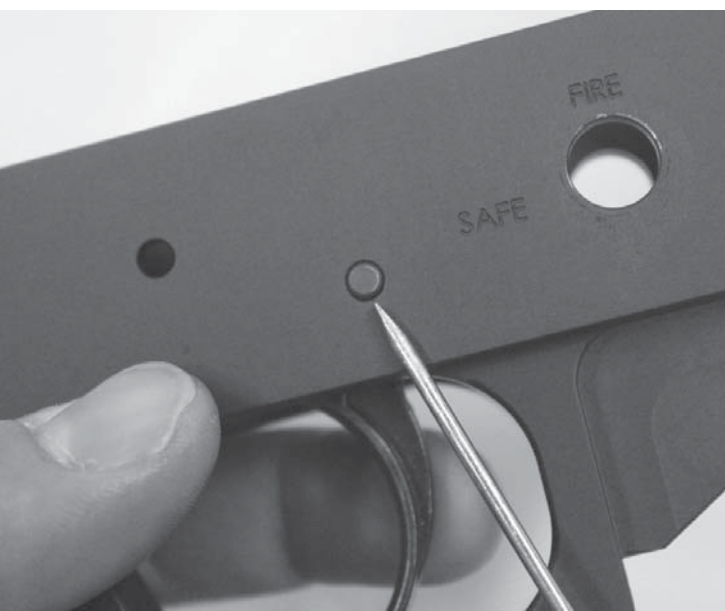


- 12.** The pistol grip is retained by a screw with a lock washer. Removing the pistol grip will also release the safety detent and spring that are housed in the right side of the receiver above the pistol grip.

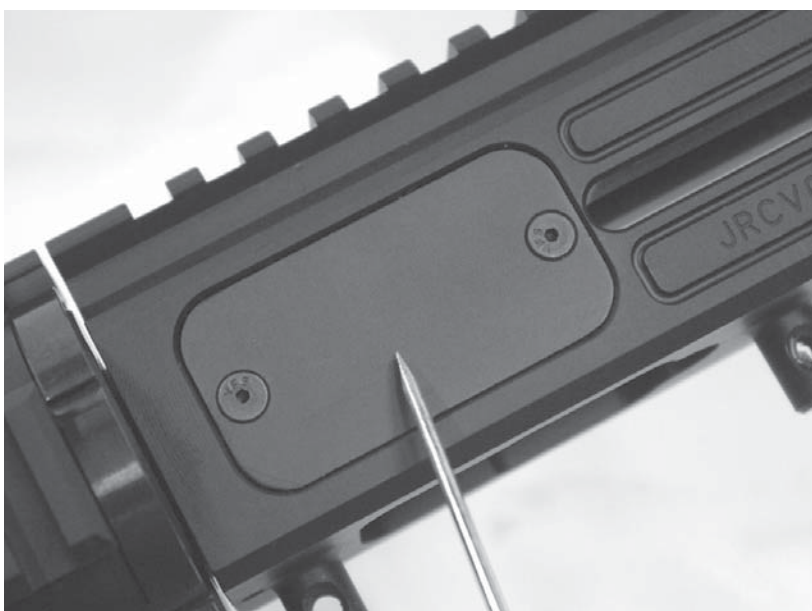
- 13.** Pull the safety lever out to the left.



- 14.** Push out the hammer pin and pull the hammer and hammer spring from the receiver.

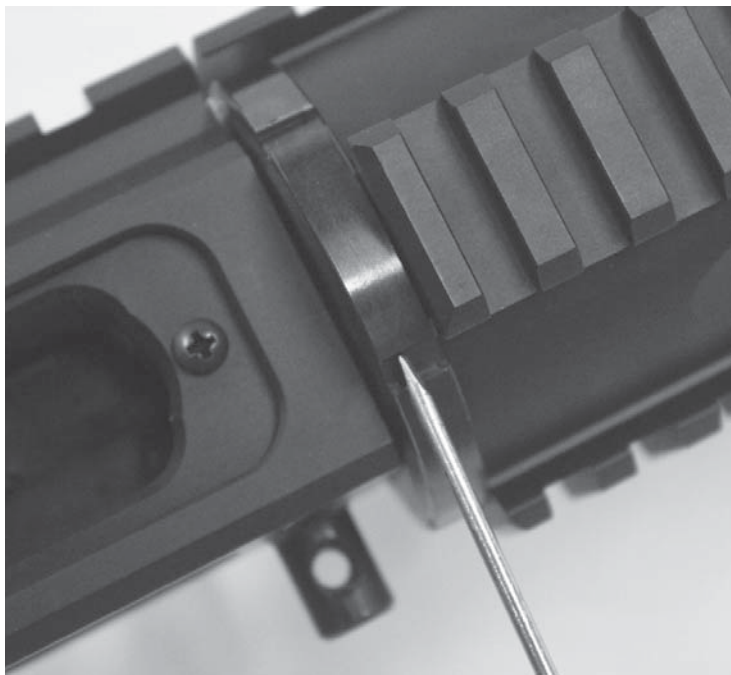


- 15.** Push out the trigger pin to pull the trigger with spring and the disconnecter with spring.

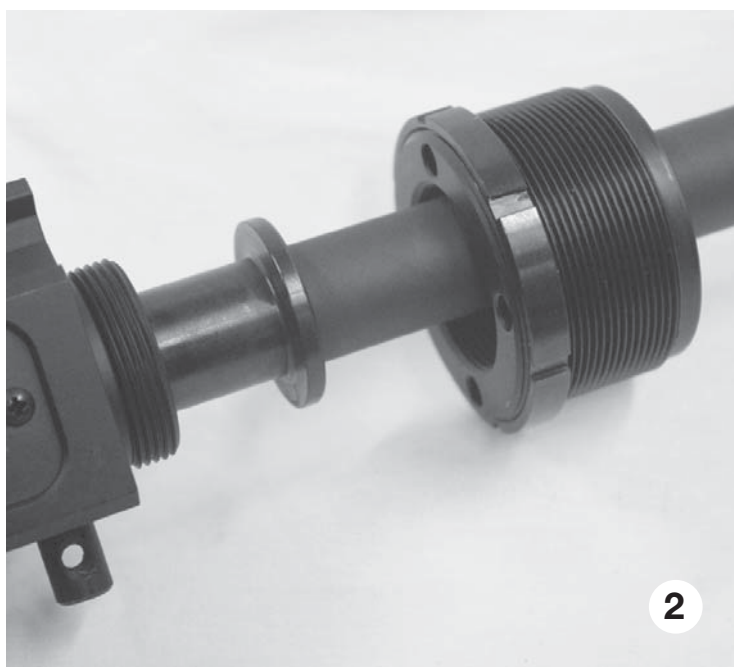


- 16.** This cover plate need not be removed unless the ejection direction is being reversed. The ejector is on the reverse side of this plate.

- 17.** To remove the handguard, the lock ring must be loosened with the appropriate wrench, or it can be tapped loose with a soft tipped punch.

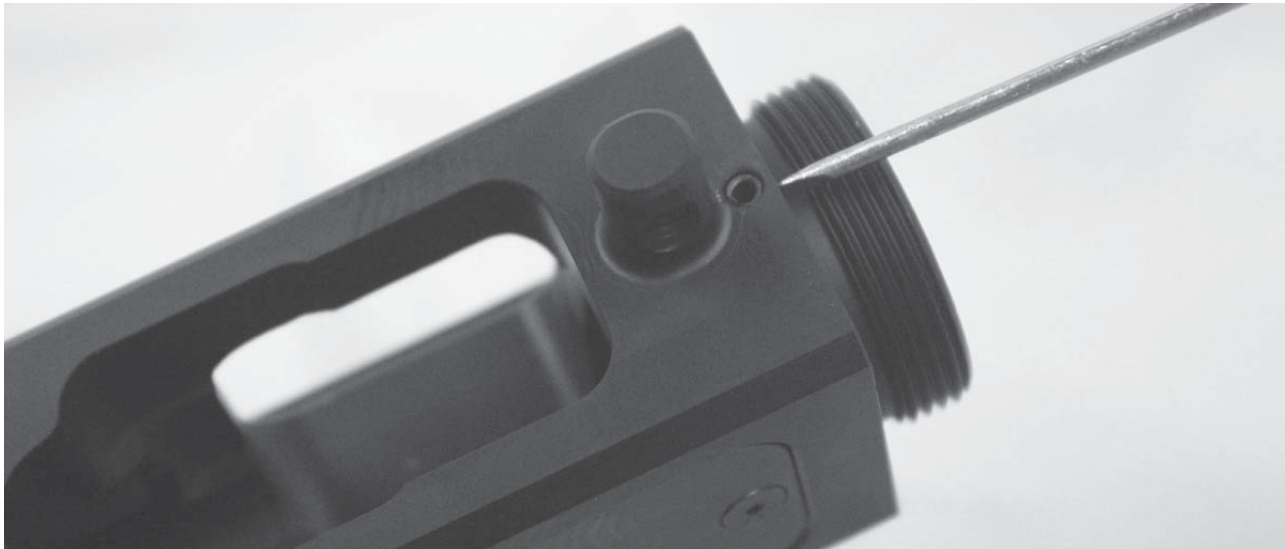


- 18.** The fore-end can then be unscrewed and removed forward off the barrel nut.



- 19.** The barrel retaining nut can then be unscrewed from the upper receiver (picture 1) and the barrel pulled from the receiver (picture 2).

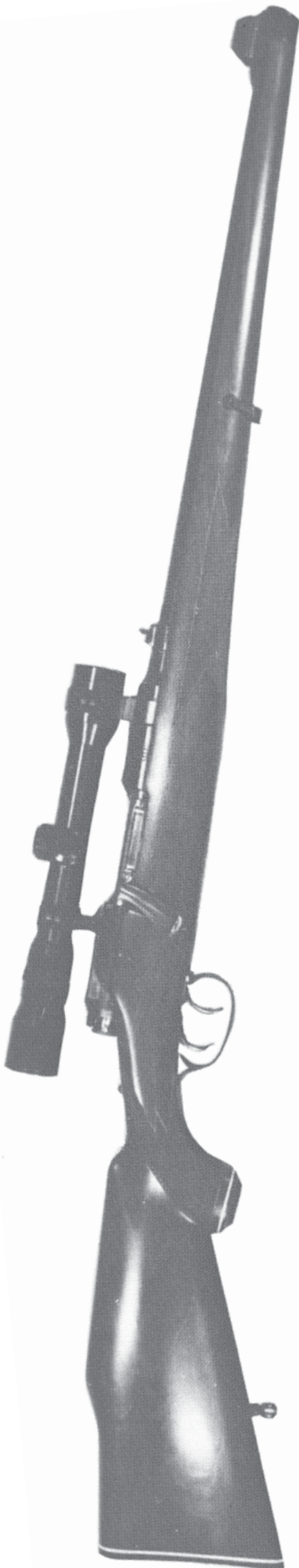
- 20.** This pin should be left in place, as it is an index pin for the barrel.



Reassembly Tips:



- 1.** The notch in the barrel should be down to align with the indexing pin in the receiver.



Mannlicher-Schoenauer Model 1961-MCA

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Mannlicher-Schoenauer Model 1961-MCA also apply to the following guns:

Mannlicher-Schoenauer Model 1952 **Mannlicher-Schoenauer Model 1956**

Data: Mannlicher-Schoenauer
Model 1961-MCA

Origin: Austria

Manufacturer: Steyr-Daimler-Puch, A.G.

Cartridges: A long list of commercial
and military rounds, from
222 to 458

Magazine capacity: 4 to 6 rounds

Overall length: 38-1/4 to 45 inches

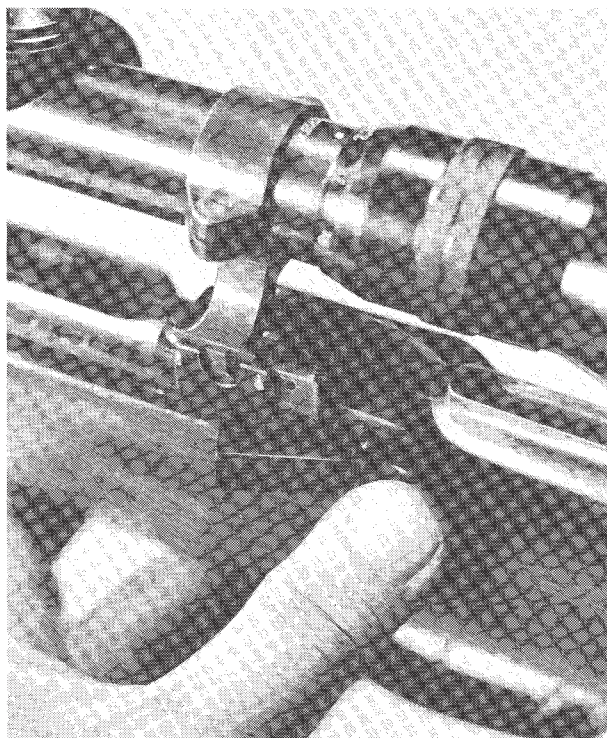
Barrel length: 20 to 25-1/2 inches

Weight: 6 to 8-1/2 pounds

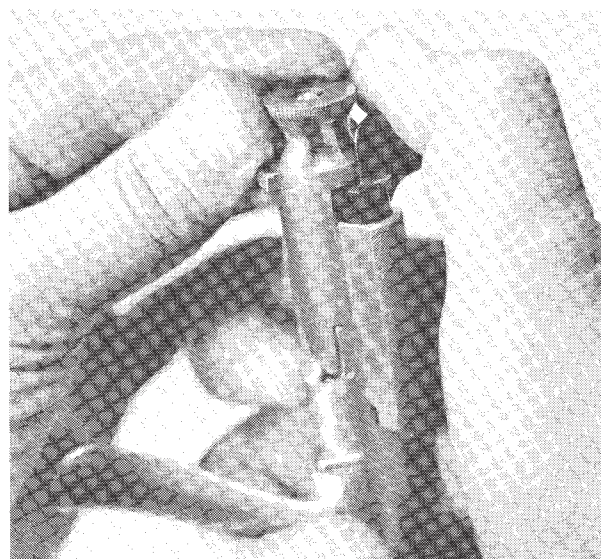
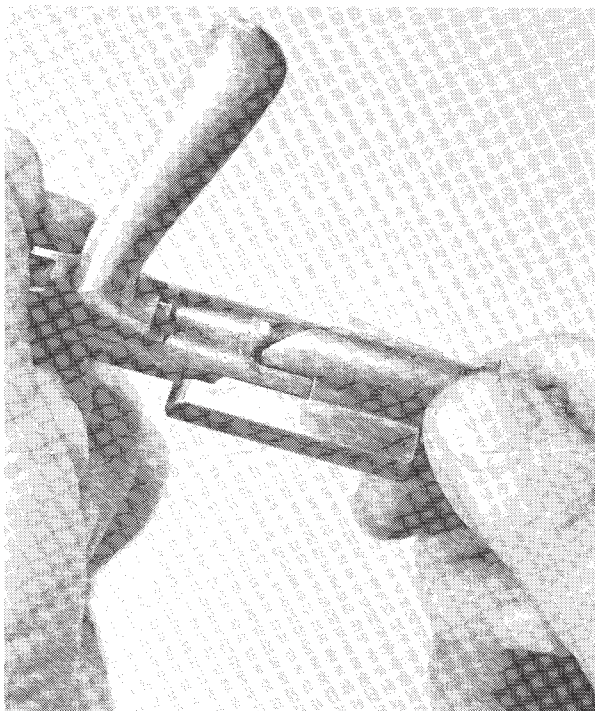
The basic Mannlicher-Schoenauer design goes all the way back to 1900. In that year, the Osterreich Waffenfabrik at Steyr introduced a rifle designed by Ferdinand Ritter von Mannlicher, with a rotary magazine system developed by Otto Schoenauer, director of the factory. A military version was adopted by Greece in 1930, and many variations of the gun have been offered for sporting use over the years. The gun is still being made, and is of outstanding quality. Allowing for a few variations and modifications among the numerous models, the instructions can generally apply to almost any Mannlicher-Schoenauer rifle.

Disassembly:

1. Open the bolt, and move it toward the rear while depressing the bolt stop, located at the left rear of the receiver. Remove the bolt toward the rear.



2. Grip the bolt firmly and pull back slightly on the cocking piece, turning it counter-clockwise (rear view) until the striker moves forward to fired position as shown.



3. Still holding the bolt firmly, press the safety-catch inward (forward), and rotate the striker knob one-quarter turn counter-clockwise (rear view) until it unlocks. Keep forward pressure on the safety.

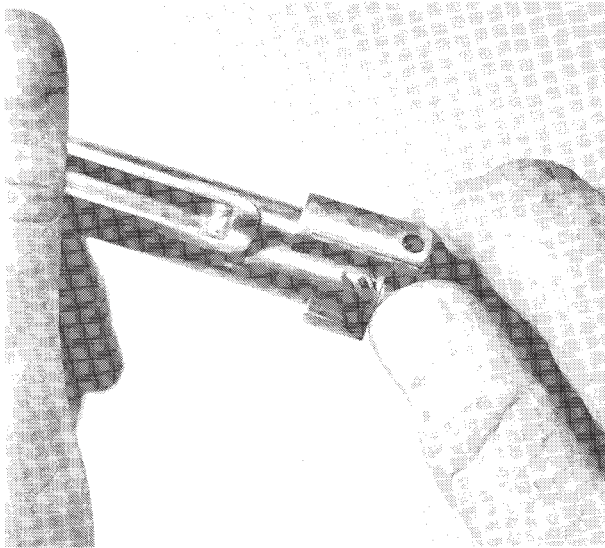
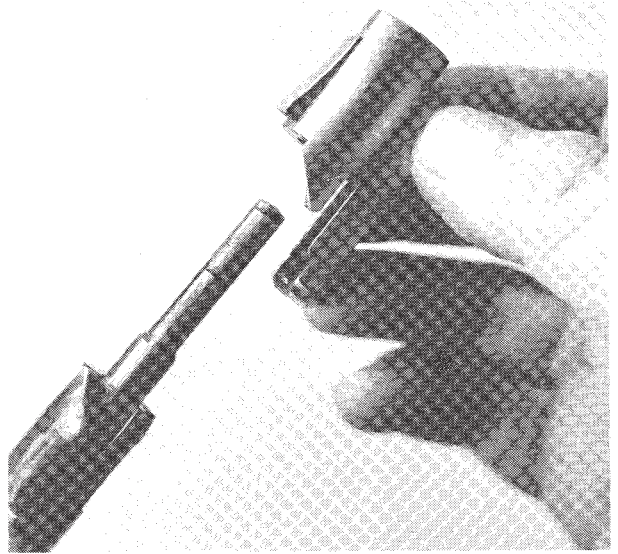


4. Remove the striker knob toward the rear.

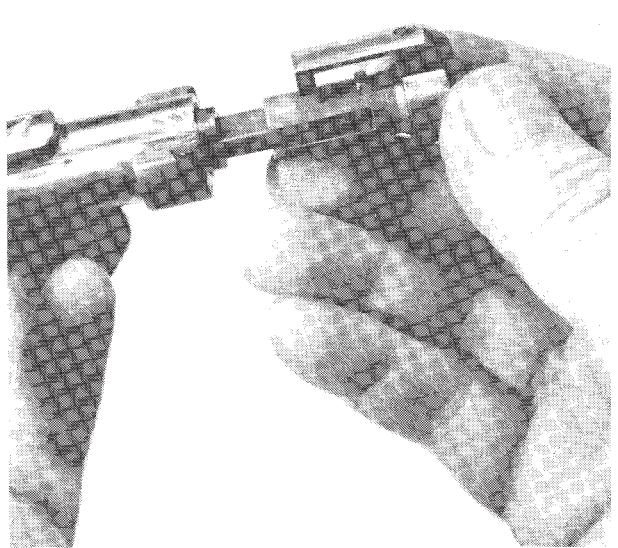
5. Slowly release the pressure on the safety, and remove the safety and its spring toward the rear.



6. Remove the cocking piece toward the rear.

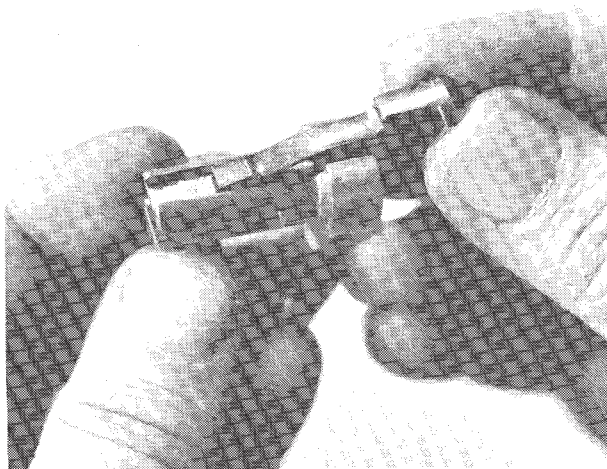


7. Turn the bolt head counter-clockwise (front view) until the ejector is aligned with the gold guide rib. **Caution:** The striker spring is quite strong, and will push the bolt head forward. Keep firm rearward pressure on the bolt head while turning it into position, and ease it off toward the front.

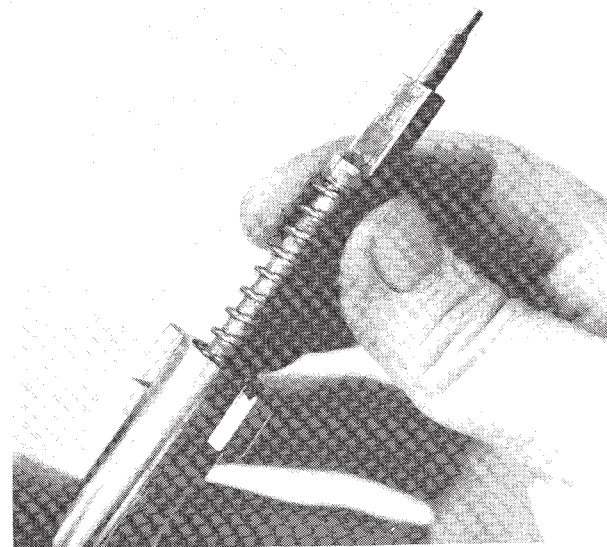
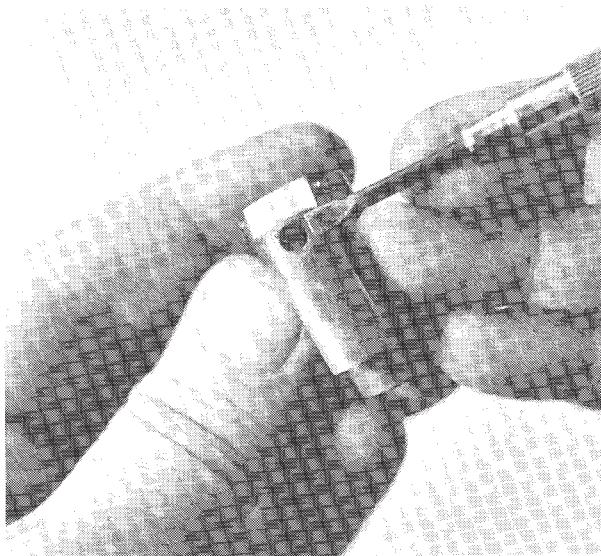


8. Slowly releasing the pressure, remove the bolt head assembly toward the front.

- 9.** Remove the extractor from its recess on the side of the bolt head. Lift it at the front, then slide it forward out of its rear dovetail cut.



- 10.** Backing out the small screw in the outer face of the ejector will allow its removal toward the front.

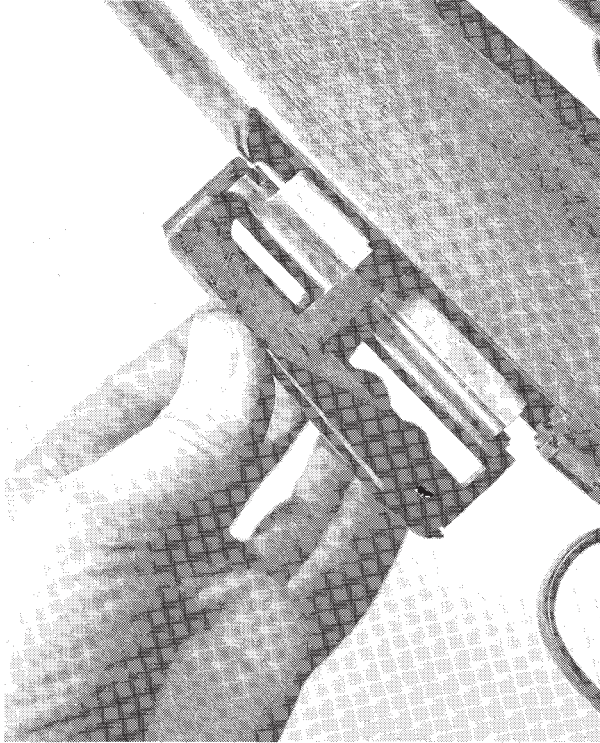


- 11.** Remove the striker and its spring from the bolt.

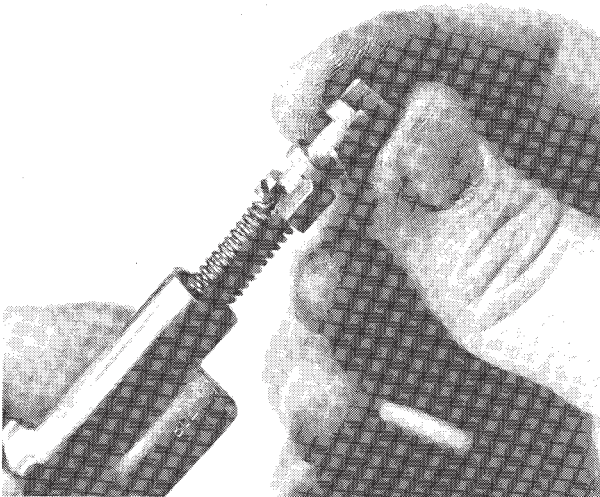
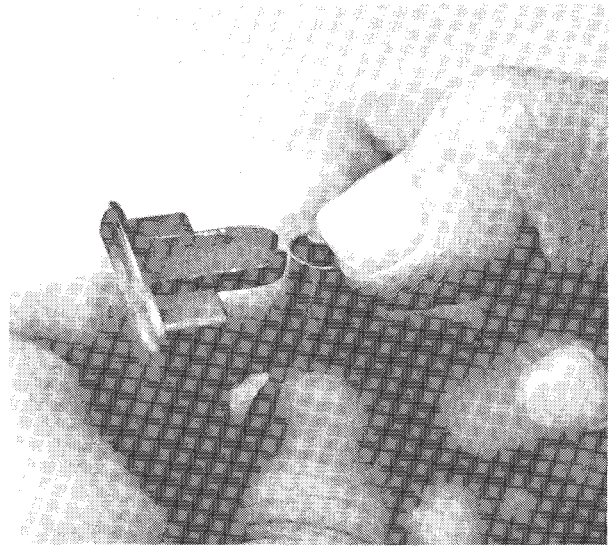


- 12.** Depress the magazine floorplate lock spring, and rotate the floorplate until it is free of its locking flanges.

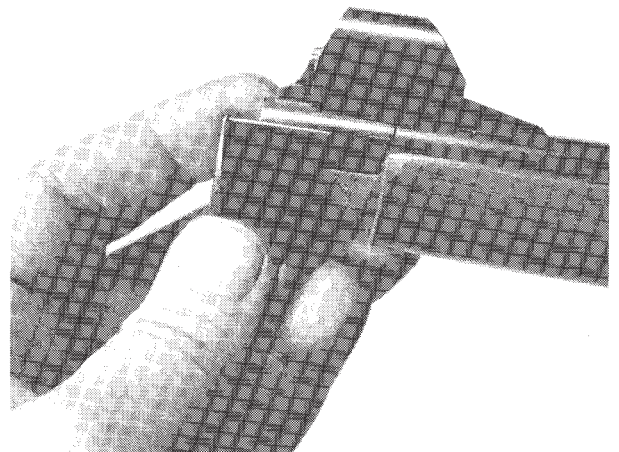
- 13.** Remove the magazine assembly downward.



- 14.** Depress the rear bearing pin of the magazine rotor, and lift the rear of the rotor away from its mounting. Lift the front bearing piece out of its vertical slot and remove the rotor.

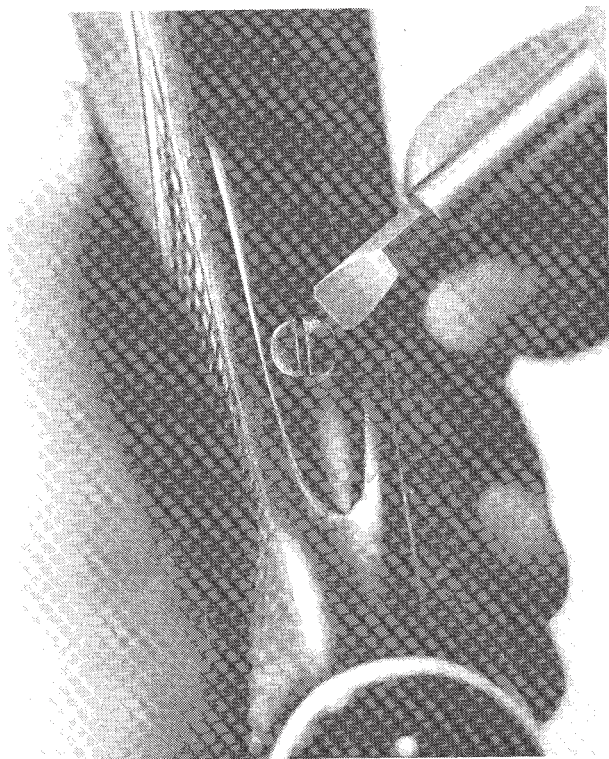


- 15.** Push the front bearing piece inward, rotate it one-quarter turn counter-clockwise (rear view), and allow it to move out of the rotor. The front bearing magazine spring, and rear bearing can now be removed toward the front.

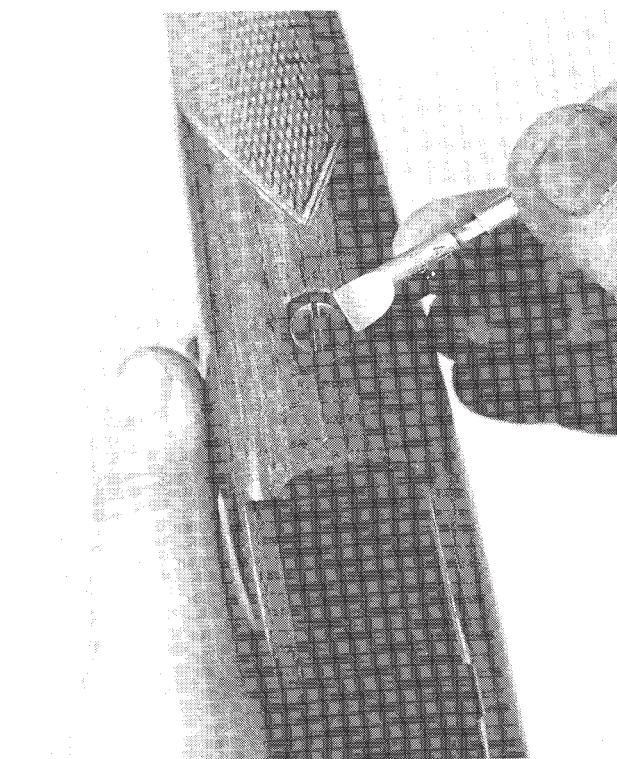
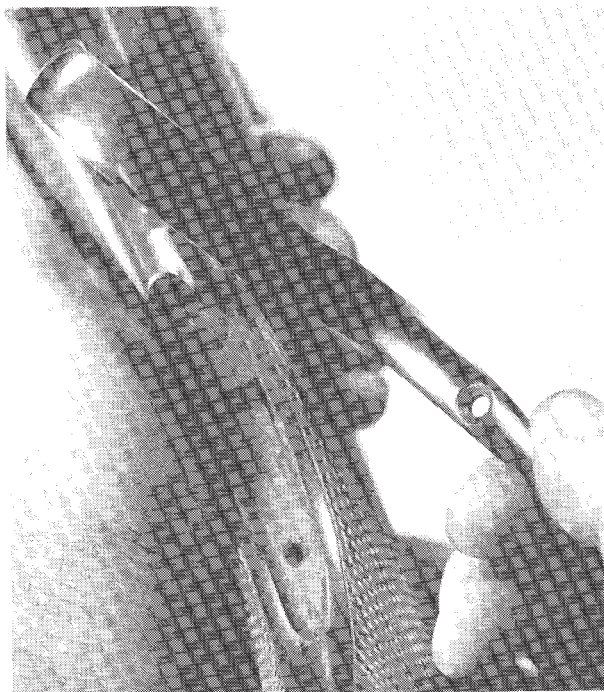


- 16.** Remove the small screw on the underside of the stock nose cap, and slide the nose cap off toward the front.

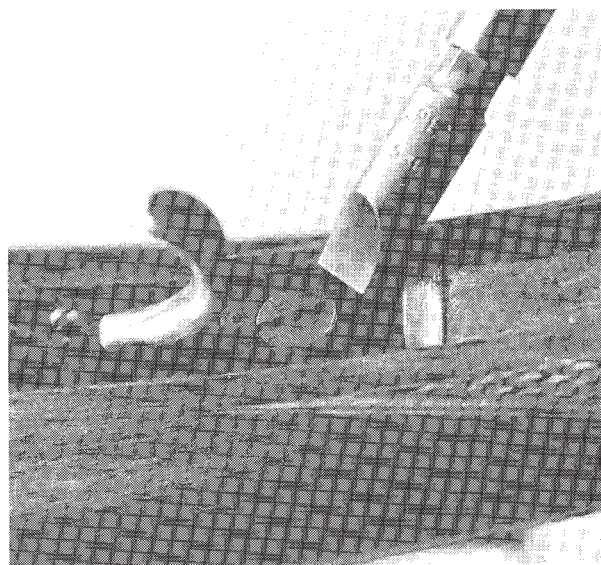
- 17.** Remove the screw in the rear tail of the trigger guard.



- 18.** Lift the tail of the guard from its recess in the stock, and swing it out toward the left side of the gun. Continue to turn it, and unscrew it from the trigger housing.

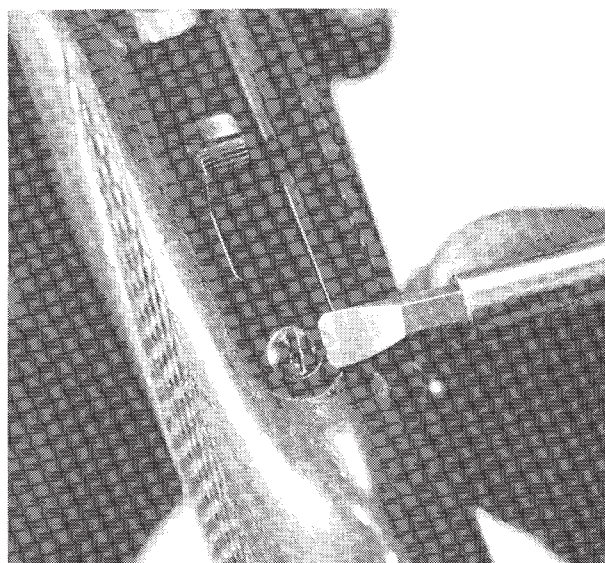
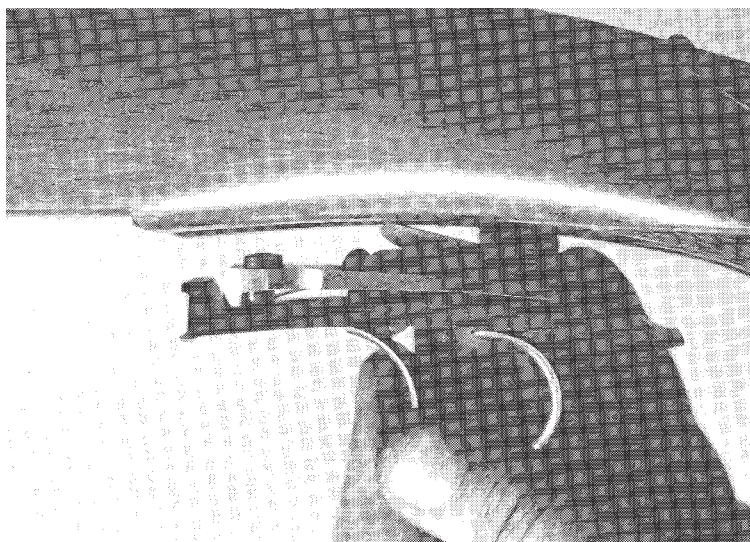


- 19.** Using a screwdriver with a wide, thin blade, remove the screw on the underside of the stock, just forward of the magazine opening.



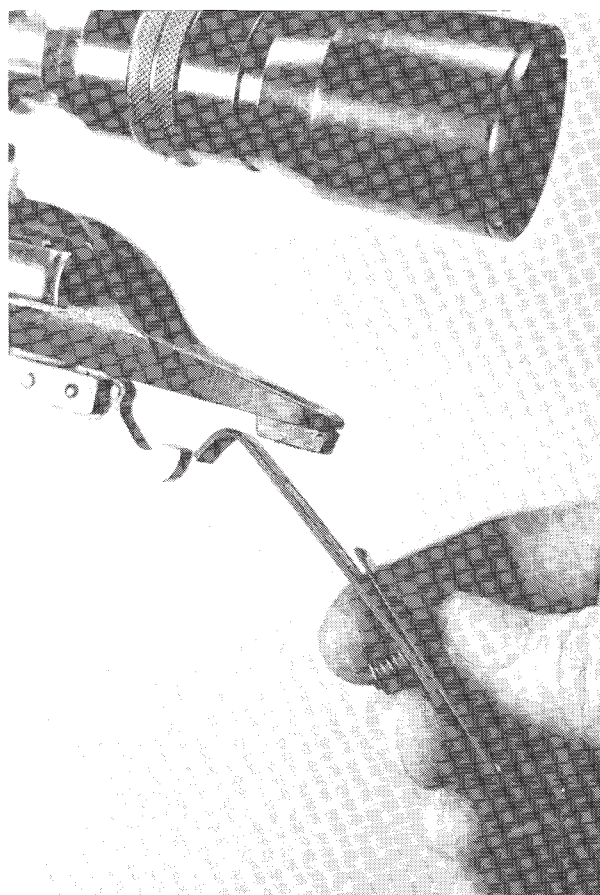
- 20.** Remove the vertical screw behind the rear trigger in the trigger housing.

- 21.** Remove the trigger assembly downward.



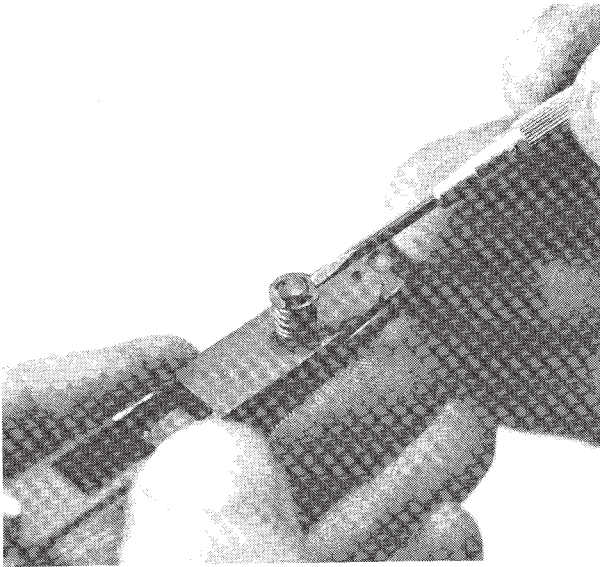
- 23.** Remove the screw at the rear of the false upper tang, and separate the action from the stock.

- 22.** Remove the cross screw that retains the front sling loop, and remove the loop from the stock.

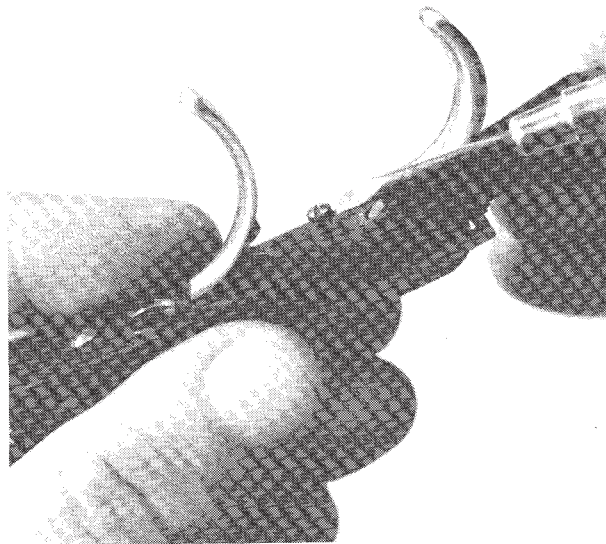
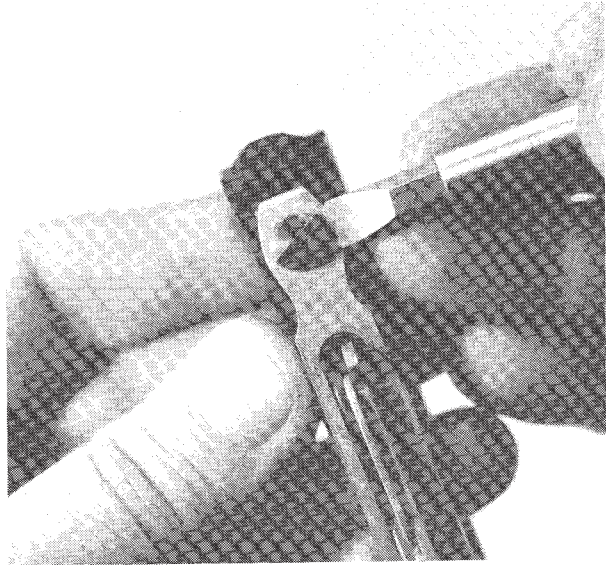


- 24.** Remove the sear-block safety by sliding it to the rear and taking it off downward.

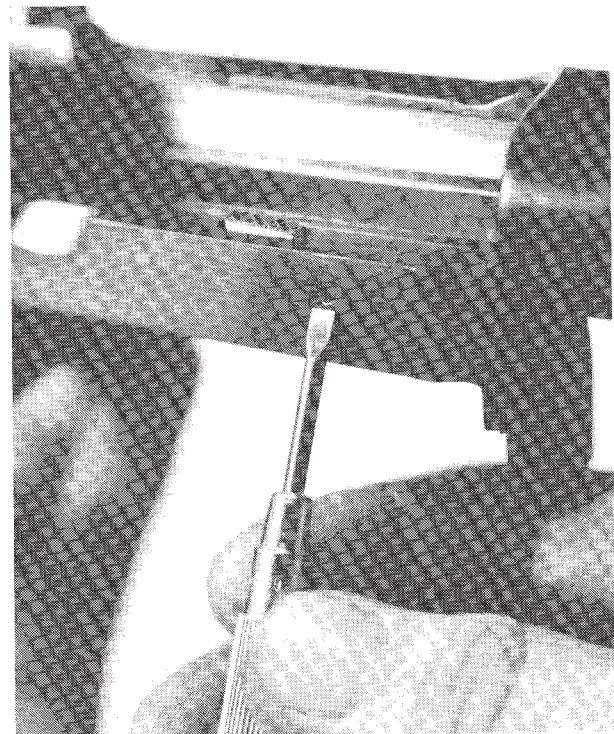
- 25.** The safety button, false upper tang, and safety positioning spring are retained on the safety bar by a C-clip, and its removal will allow separation of these parts. **Caution:** *The safety positioning spring is quite strong. Restrain it as the C-clip is removed.*



- 26.** Removal of the large screw at the top front of the trigger assembly will allow removal of the heavy set-trigger spring, and the lighter firing trigger spring beneath it. The triggers are retained by cross pins, and are removed downward.

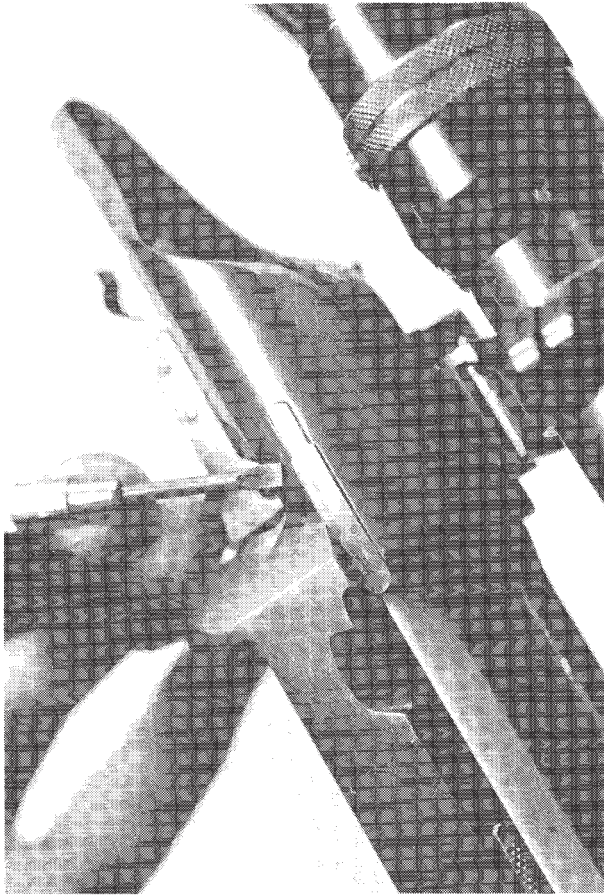


- 27.** If the trigger pull adjustment screw is removed during disassembly, readjustment is not difficult. Turning the screw inward (clockwise) lightens the trigger pull.

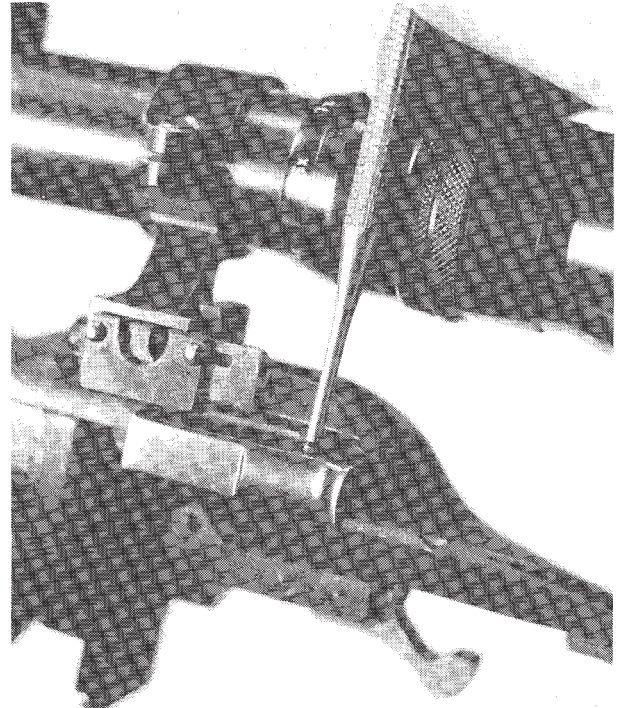


- 28.** The cartridge stop and its spring are housed in the right rail of the receiver, and the stop is retained by its pivot screw. After removal of the screw, the cartridge stop and spring are removed downward.

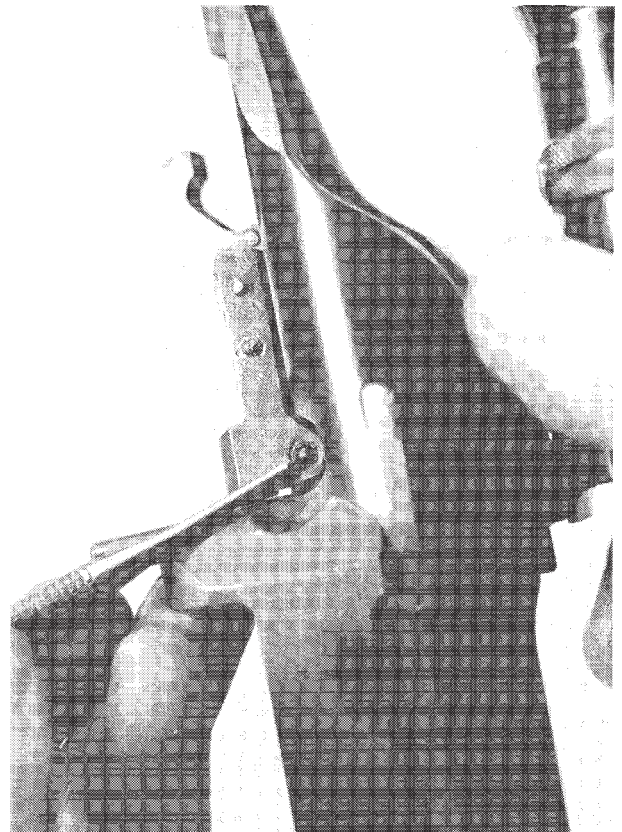
- 29.** The bolt tension spring is dovetail-mounted and locked by a stud at the front. There is an access hole inside the receiver for insertion of a tool to lift the spring and move it out forward. In normal take-down, it is best left in place.



- 30.** The bolt stop is retained by its vertical pivot pin. The pin is pushed out downward, and the bolt stop and its spring are removed toward the left.

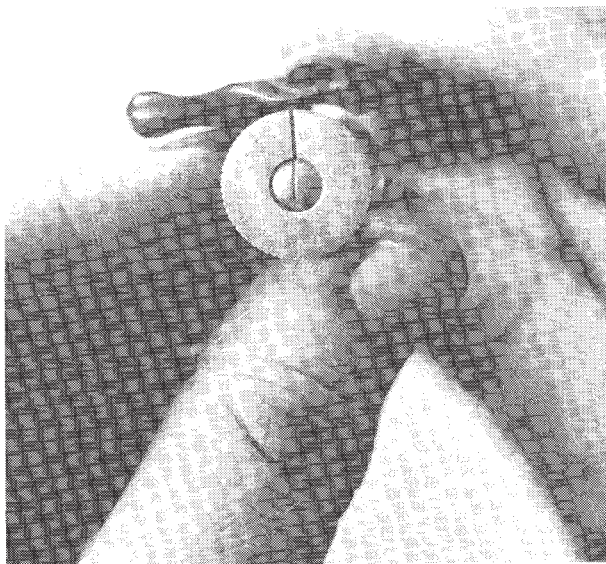


- 31.** The sear assembly is retained by a cross pin on the underside of the receiver. Drifting out the cross pin will allow the sear assembly to be removed downward and toward the rear. Restrain the sear spring when the pin is drifted out, as it is quite strong. The sear assembly can be taken apart by drifting out the small cross pins.

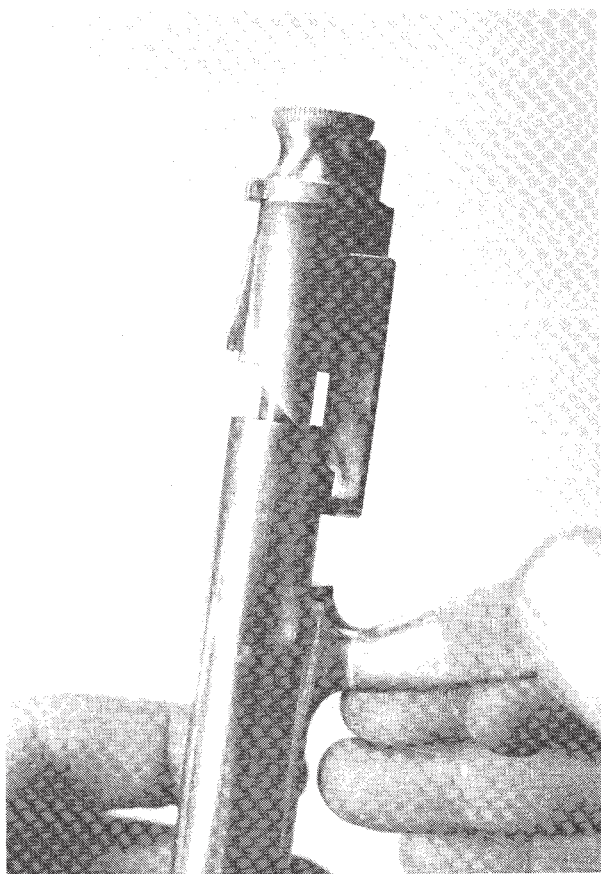
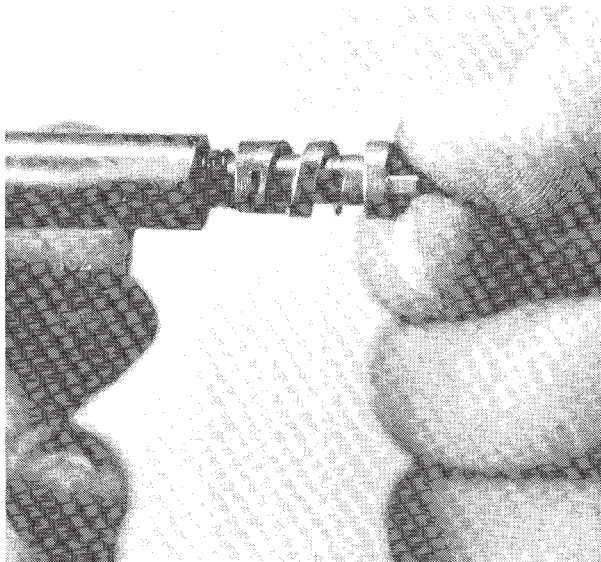


Reassembly Tips:

1. When turning the striker knob back onto the cocking piece, note that there is an index line on the rear tip of the striker shaft, and on the rear face of the knob. On the final turn, these must be aligned.



2. When replacing the bearing end pieces and spring in the magazine rotor, note that the rotor and front bearing have mating helical tracks, which automatically re-tension the spring as the front bearing is turned into place.



3. Before the bolt is put back into the receiver, the striker must be in cocked position. Grip the bolt firmly and pull back on the knob while turning the end piece clockwise (rear view) until the striker is in the position shown.

Marlin Model 336

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Marlin Model 336 also apply to the following guns:

Marlin Model 30AS

Marlin Model 336L

Marlin Model 336 LTS

Marlin Model 336 Zipper

Marlin Model 336 Marauder

Marlin Model 336 Extra-Range

Marlin Model 336C

Marlin Model 336DL

Marlin Model 336 Sporting Carbine

Marlin Model 336T

Marlin Model 336CS

Data: Marlin Model 336

Origin: United States

Manufacturer: Marlin Firearms Company
North Haven, Connecticut

Cartridge: 219 Zipper,
30-30 Winchester,
32 Winchester Special,
307 Winchester,
35 Remington,
356 Winchester,
375 Winchester,
44 Remington Magnum

Magazine capacity: 6 rounds

Overall length: 38-1/2 inches

Barrel length: 20 inches

Weight: 7 pounds

An extensive redesign of the Marlin Model 36 (1936) rifle, the Model 336 was first offered in 1948. It was initially available in several calibers, but in recent years only the 30-30 and 35 Remington chamberings have been in production. Although most lever-action guns are generally more complicated than other manually-operated types, the Model 336 has a relatively easy takedown, with no really difficult points. Several sub-models of this gun were made, and the instructions will apply to any of these.

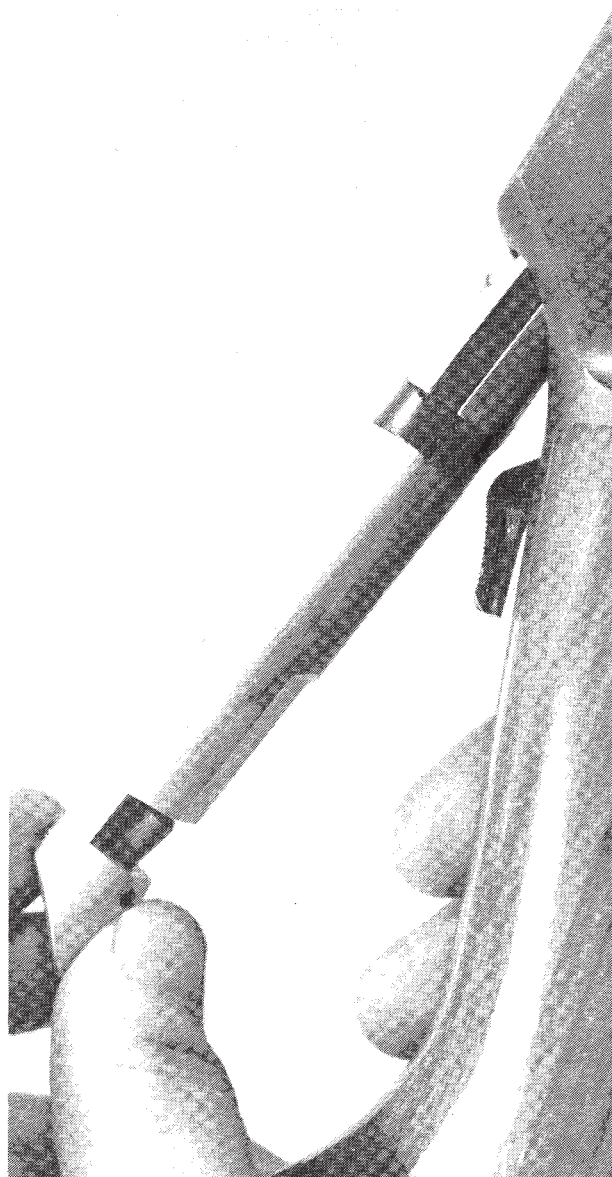


Disassembly:

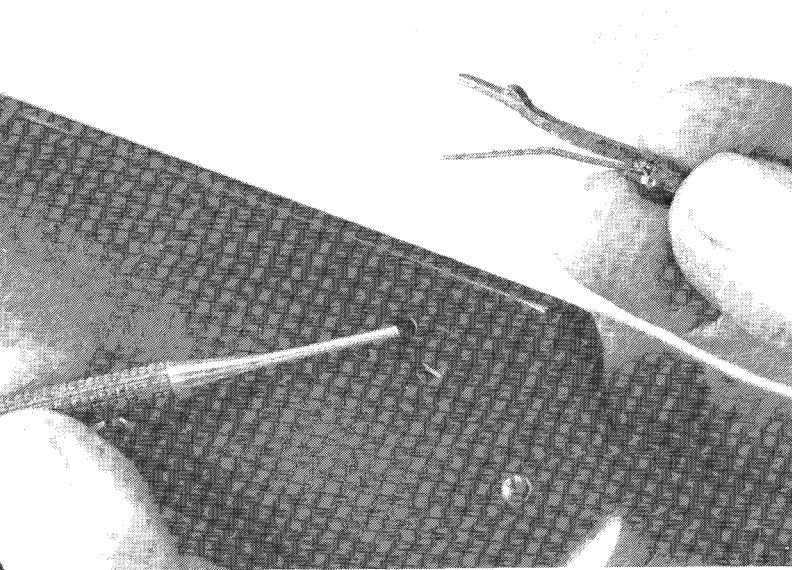
1. Partially open the lever, and take out the lever pivot cross screw. Remove the lever downward.



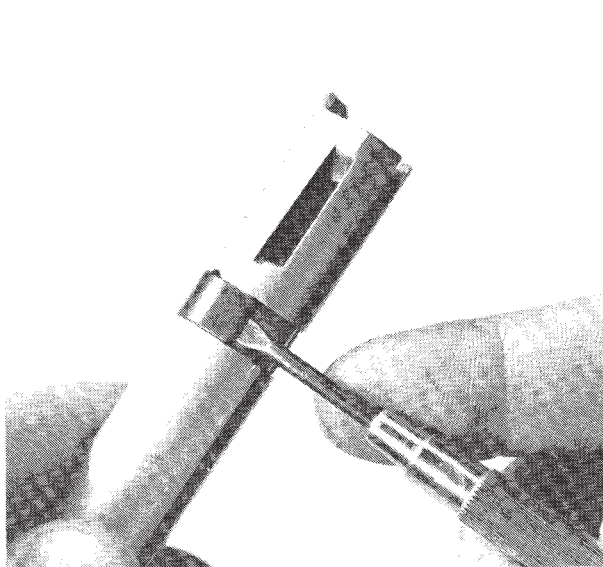
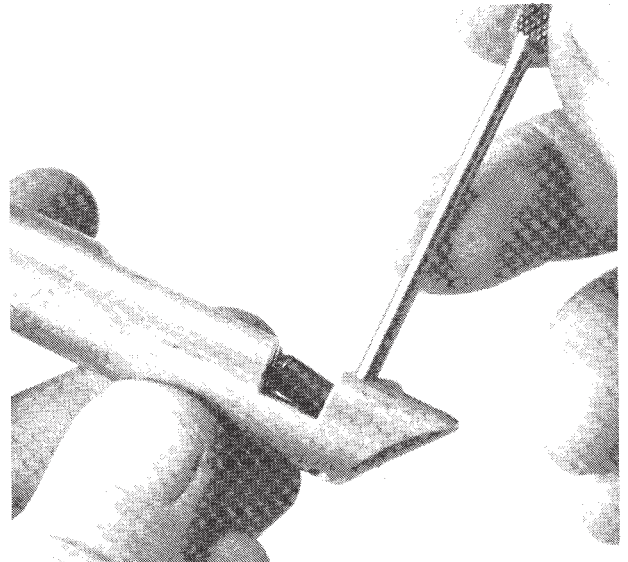
2. Remove the bolt toward the rear.



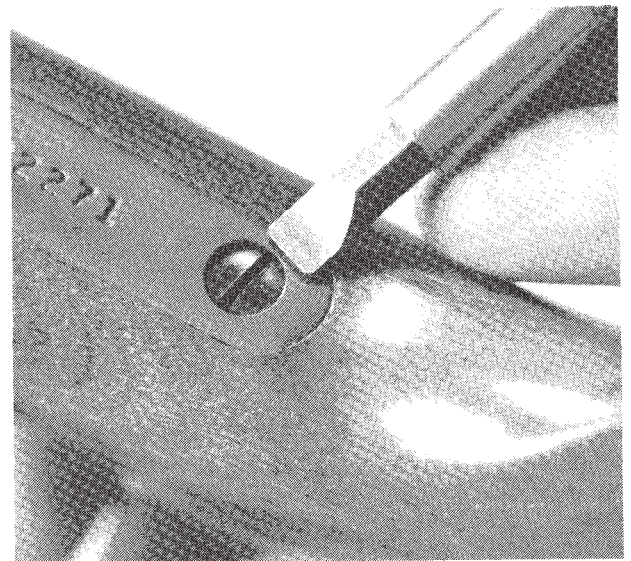
- 3.** Push the ejector mounting stud inward, and remove the ejector from inside the receiver. The ejector spring is staked in place, and removal in normal disassembly is not advisable, except for repair.



- 4.** Drifting out the vertical roll pin at the rear of the bolt will release the rear firing pin and its spring for removal toward the rear.

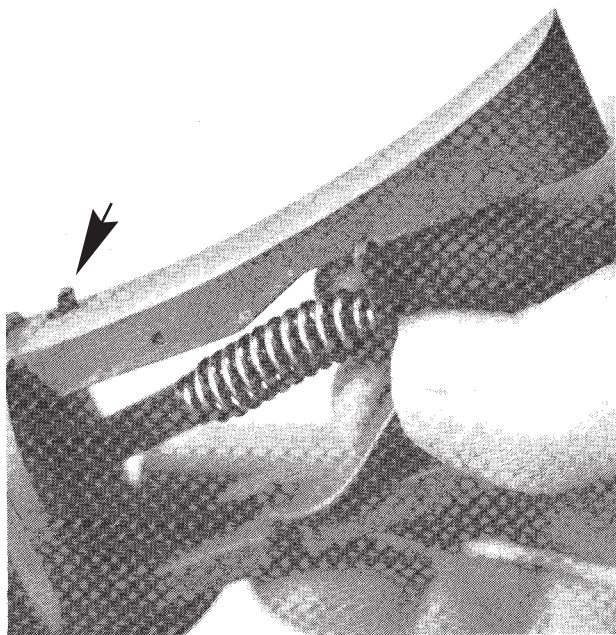


- 5.** Use a small screwdriver to pry the extractor clip off its recess on the front of the bolt, using a fingertip to lift the front of the extractor out of its channel. Removal of the extractor will give access to the vertical pin that retains the front firing pin. After the pin is drifted out, the firing pin is removed toward the rear.

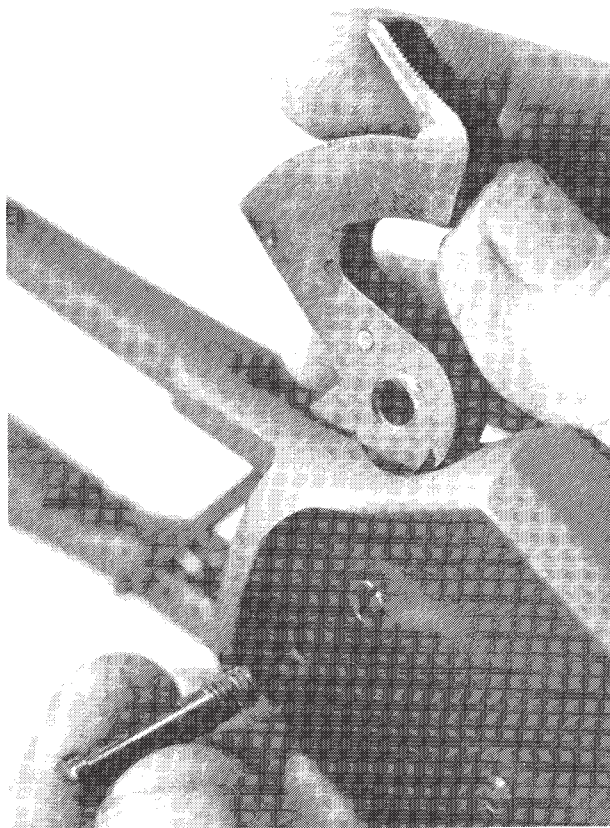


- 6.** Remove the vertical screw at the rear of the upper tang, and take off the stock toward the rear. If the stock is tight, bump the front of the comb with the heel of the hand to start it off.

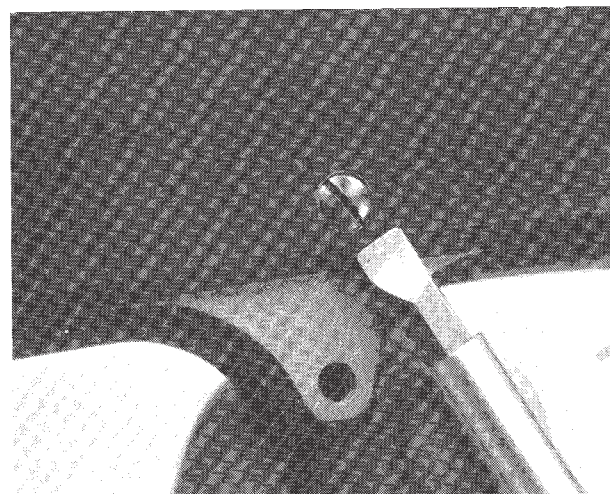
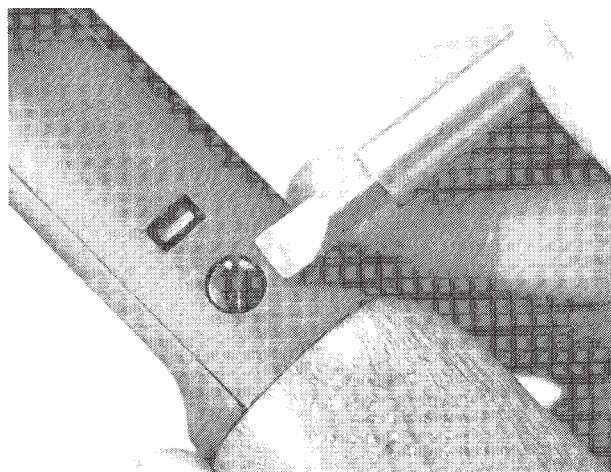
- 7.** Depress the trigger-block (arrow), on the underside behind the trigger, and gently lower the hammer to the fired position. With smooth-jawed pliers or strong fingers, grip the upper portion of the hammer spring base plate, tilt it forward, and slide it toward the side, moving its lower end out of its groove in the lower tang. Keep a firm grip on the plate, as the spring is under some tension, even when at rest. Remove the plate, and the hammer spring, toward the rear.



- 8.** Remove the hammer pivot screw, and take out the hammer upward. Drifting out the cross pin at the rear of the hammer will release the hammer spring strut, but in normal takedown it is best left in place.

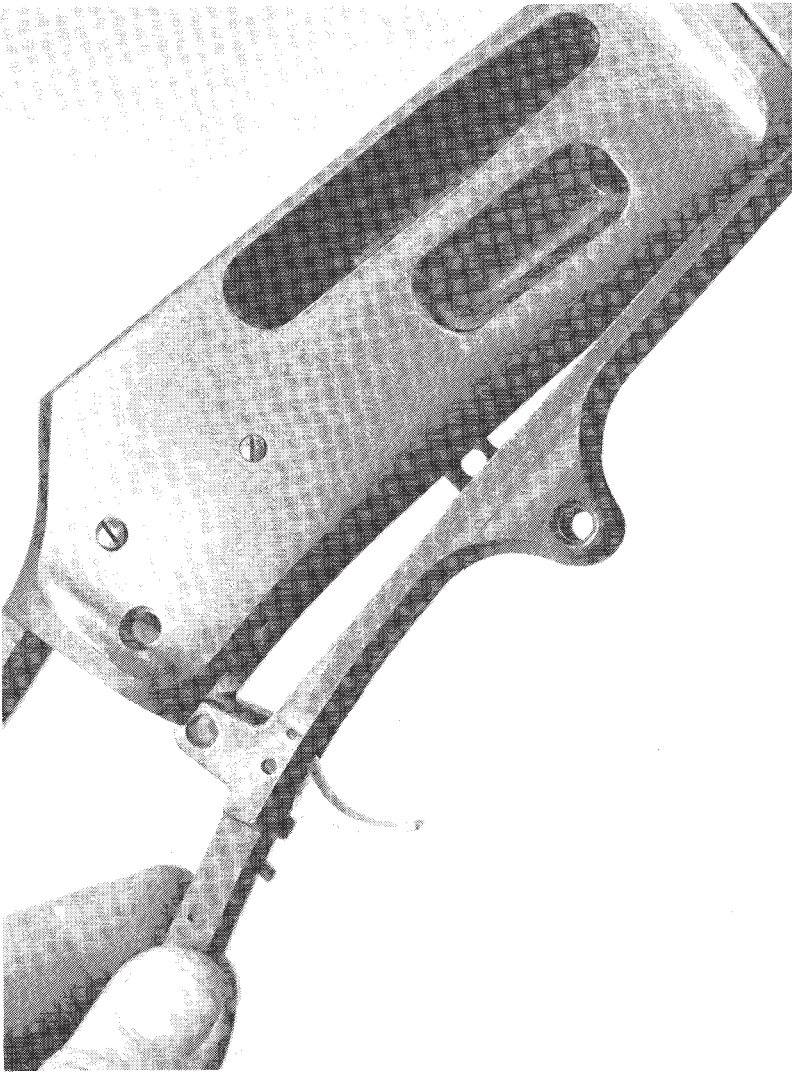


- 9.** Remove the vertical screw on the underside at the forward end of the trigger housing.

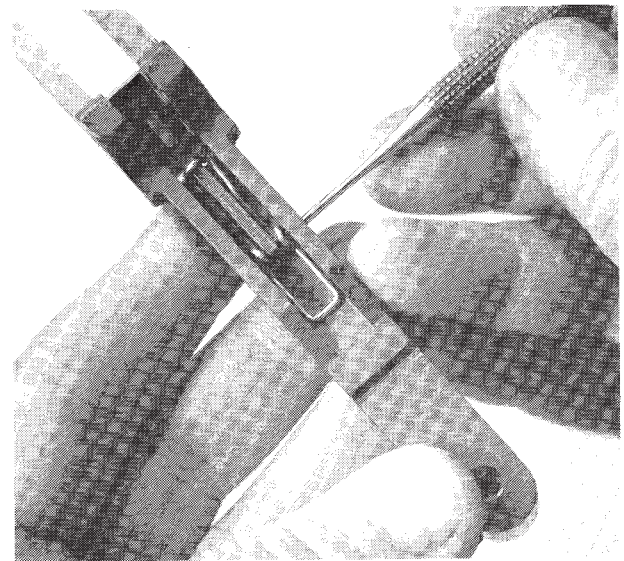
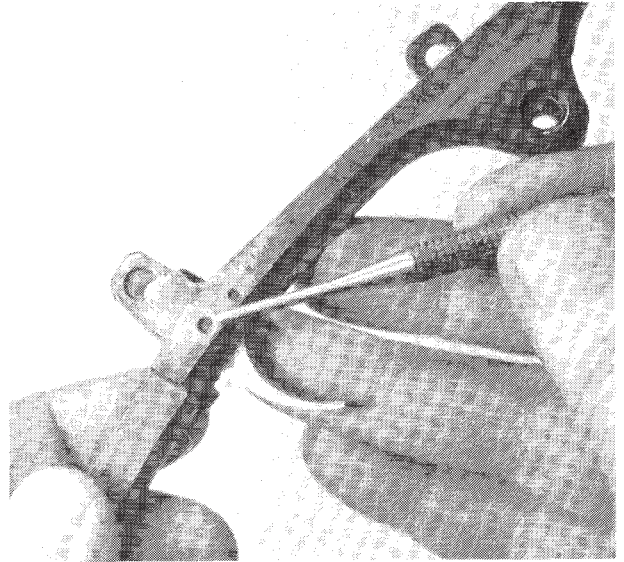


- 10.** Remove the screw on the left side of the receiver at lower center.

- 11.** Remove the trigger housing downward and toward the rear. If it is very tight, it may be necessary to tap it with a plastic hammer to start it out.

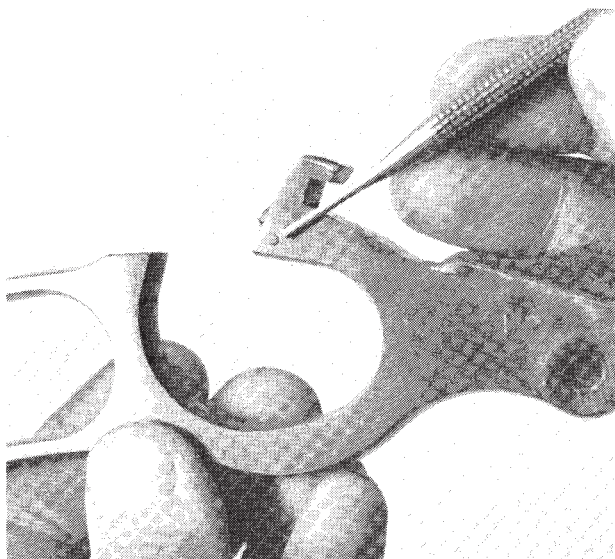


- 12.** Drifting out the trigger cross pin will allow the trigger and sear to be removed downward. The small pin just forward of the trigger is the contact for the lever latch, and does not have to be removed.

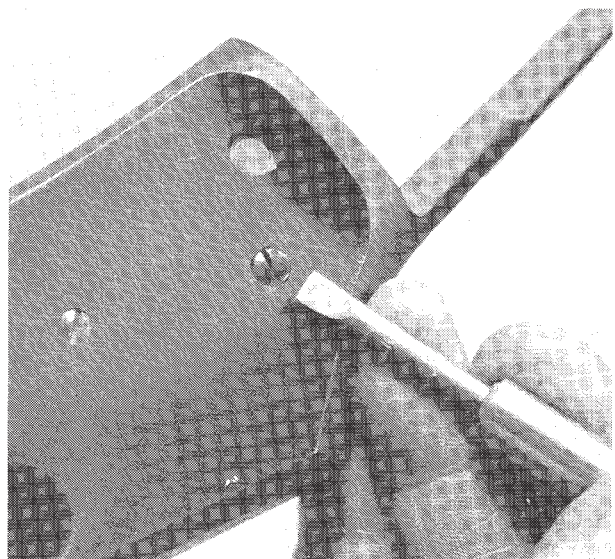
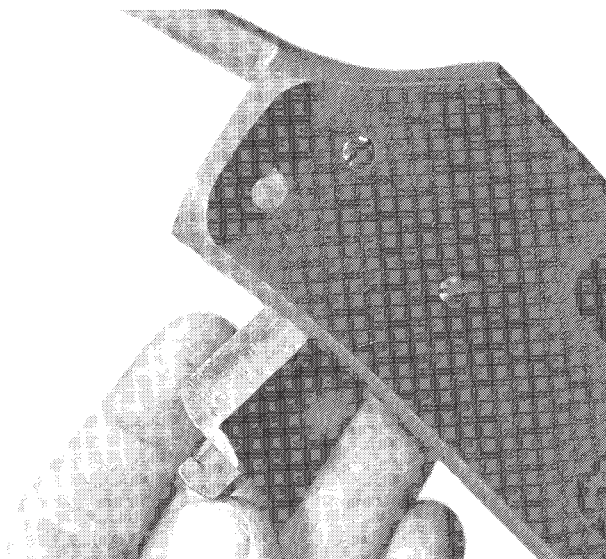


- 13.** A small cross pin in the lower tang portion of the trigger housing retains the trigger safety-block and the combination spring that powers the block and the trigger/sear system. After the pin is drifted out, the block and spring are removed upward. **Caution:** The spring is under tension. Control it, and ease it out.

- 14.** The lever latch plunger and its spring are retained in the lever by a cross pin, and are removed toward the rear. The short coil spring is quite strong, so control it and ease it out.



- 15.** After the trigger housing plate is taken off, the bolt-locking block can be moved downward out of the receiver.

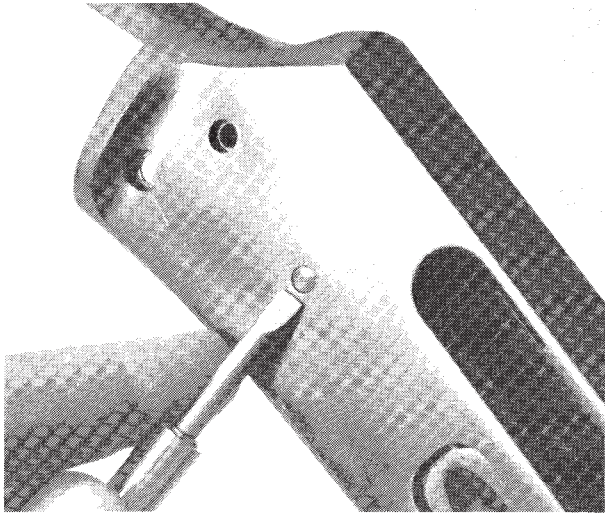


- 16.** Remove the carrier pivot screw, located on the right side of the receiver at center rear.

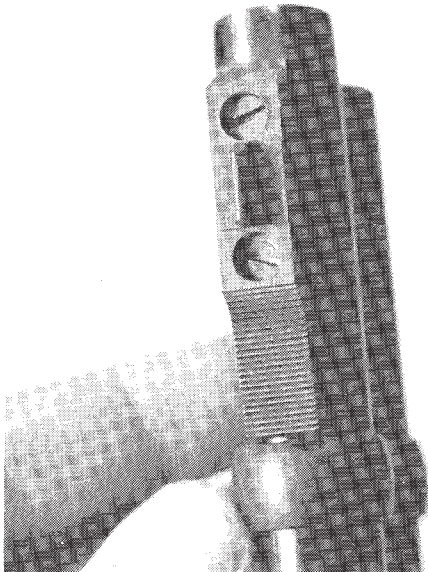
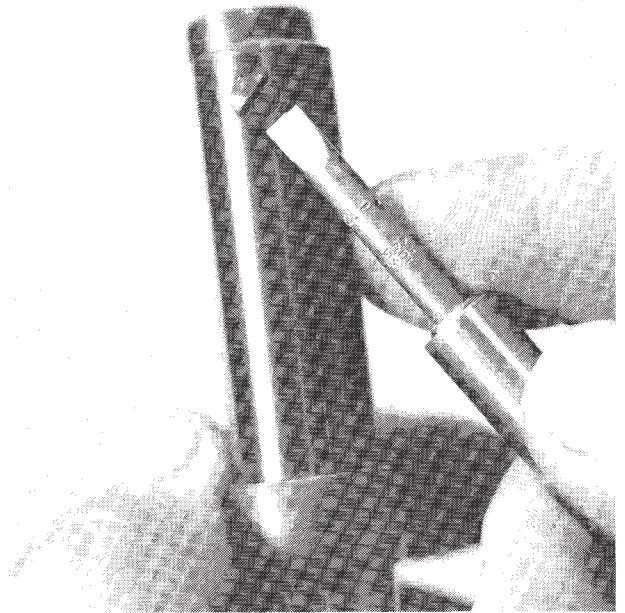
- 17.** Remove the carrier downward. The carrier rocker and its spring are retained on the left side of the carrier by a vertical pin.



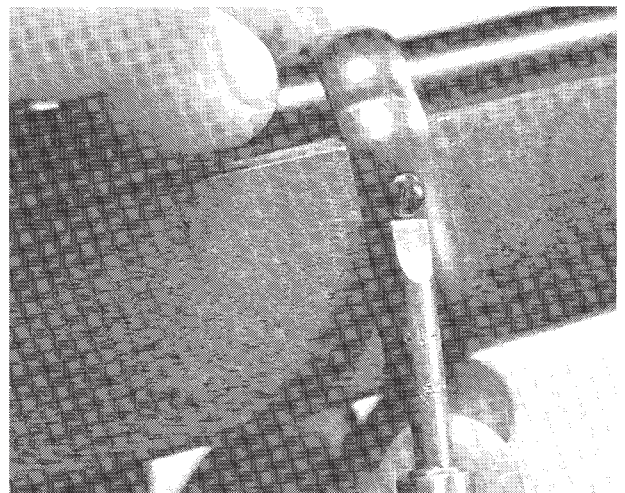
- 18.** Remove the small screw on the right side of the receiver to the rear of the loading port, and take out the loading gate from inside the receiver.



- 19.** Remove the screw on the underside of the magazine tube at its forward end, and take out the tube end piece, magazine spring, and follower. **Caution:** *Some magazine springs are more powerful than others, and all are under some tension. Ease the end piece out, and control the spring.*

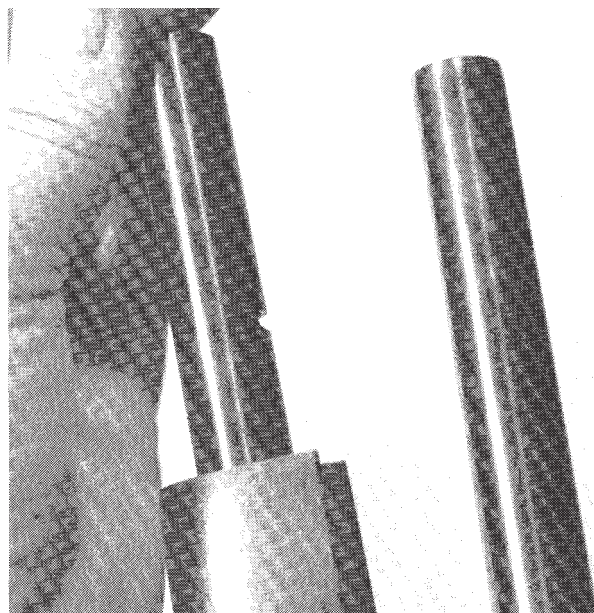


- 20.** Slide the front sight hood off toward the front, remove the two vertical screws in the front sight base, and take off the front sight upward.

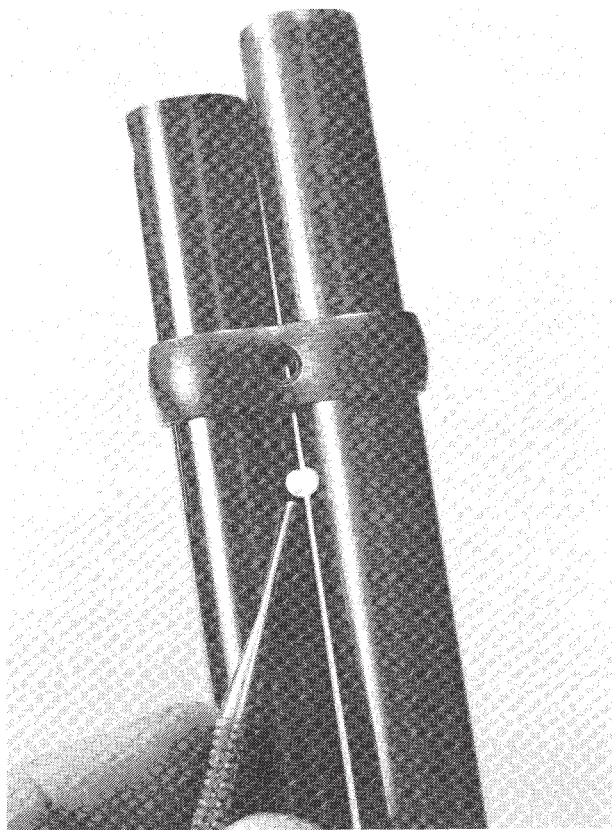


- 21.** Take out the cross screw in the front barrel band. Take out the cross screw in the rear barrel band, and slide the barrel band off toward the front.

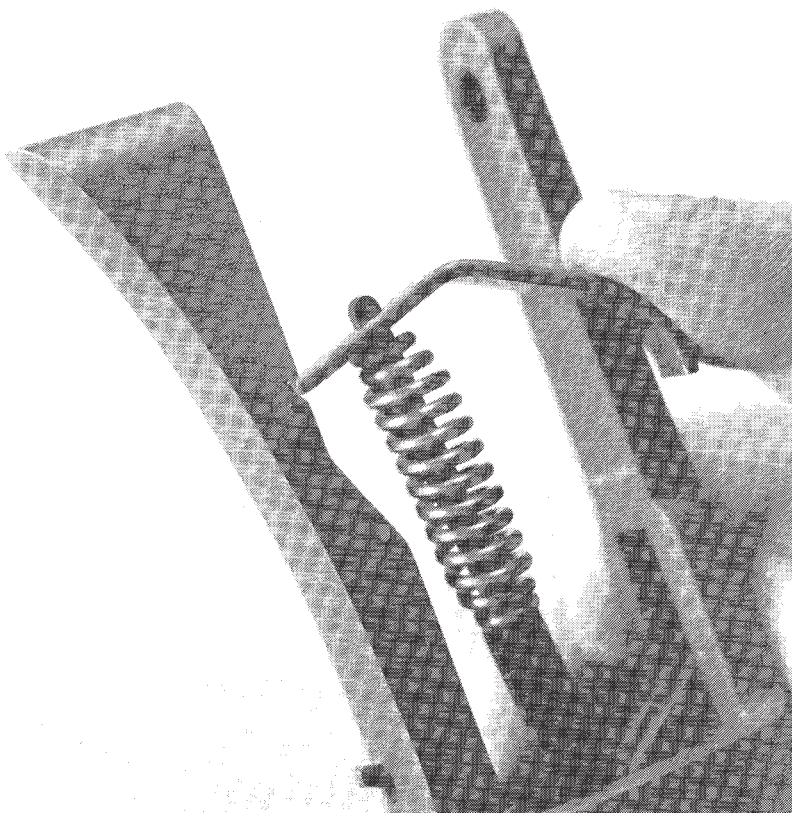
- 22.** Move the forend wood forward to free the magazine tube, then slide the magazine tube, forend wood, and front barrel band off toward the front.



Reassembly Tips:



- 1.** When replacing the magazine tube, be sure its rear tip enters the well in the front of the receiver. Be sure it is oriented at the front so its screw groove will align with the hole in the front barrel band.



- 2.** When replacing the hammer spring system, hook the lower end of the spring plate in its groove in the lower tang, tip the top of the plate forward, beneath the upper tang, and slide the plate across into place.



Marlin X7Y

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the Marlin X7Y also apply to the following guns:

Marlin X7

Marlin X7C

Marlin X7S

Marlin X7V

Data: Marlin X7Y

Origin: United States

Manufacturer: Marlin Firearms Co., Mayfield, KY

Cartridge: .243 Win., 7mm-08 Rem, .308 Win.

Magazine Capacity: 4 rounds

Overall Length: 41 inches

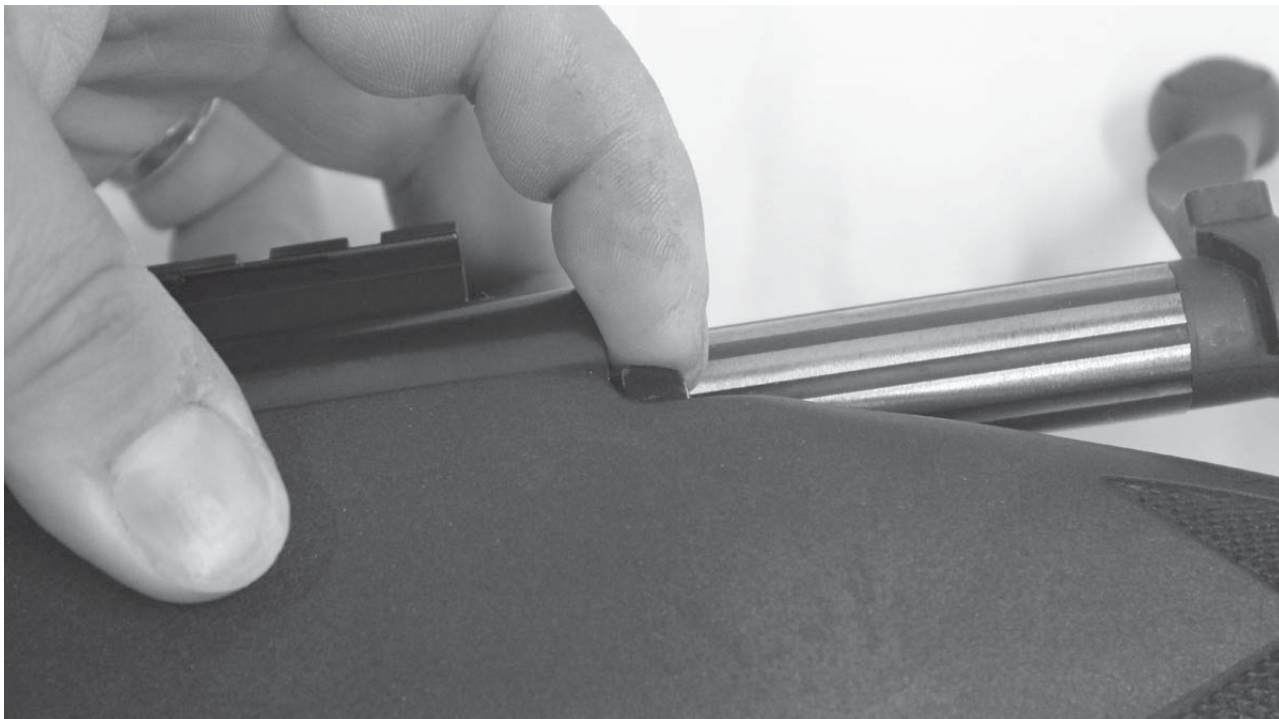
Barrel Length: 22 inches

Weight: 6.5 pounds

Marlin's newest addition to the inexpensive bolt-action centerfire rifle market is the X7 series of rifles. The entire X7 series is virtually identical, with camo, stainless steel, youth, and varmint hunting models. An adjustable trigger with integral trigger safety (analogous to Savage's models, but not identical) is standard, as is the blind magazine box. A sub \$500 price tag is also a good selling point, as is its availability in the half-dozen or so of the most commonly used deer chamberings. The X7Y youth model is chambered only with short-action cartridges.

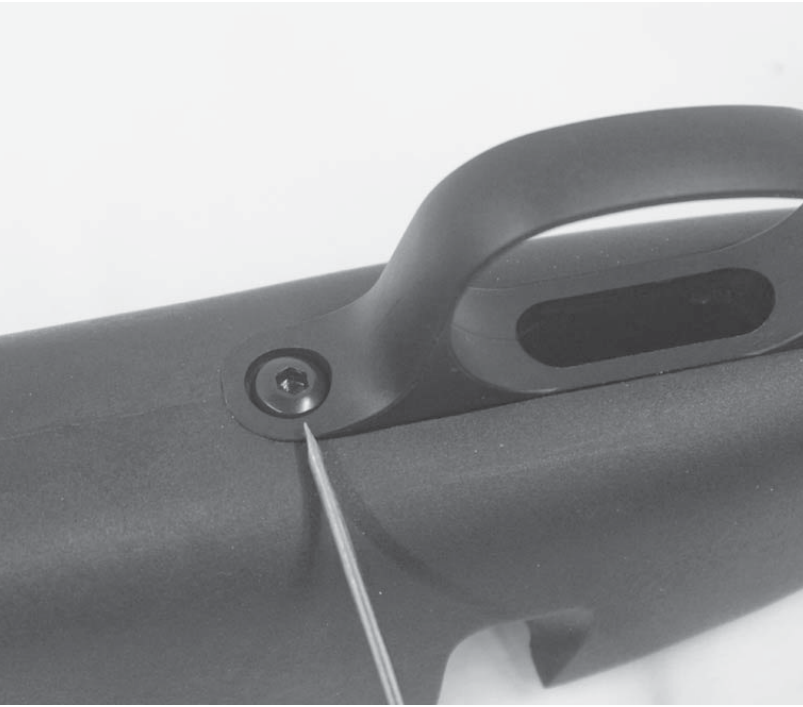
Disassembly:

1. With the bolt open, depress the bolt catch downward and then pull the bolt rearward from the receiver.

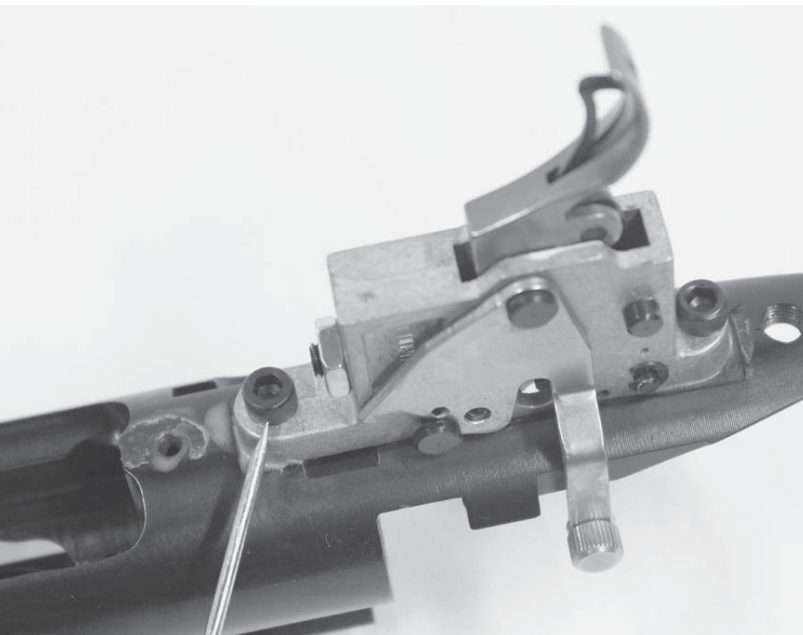
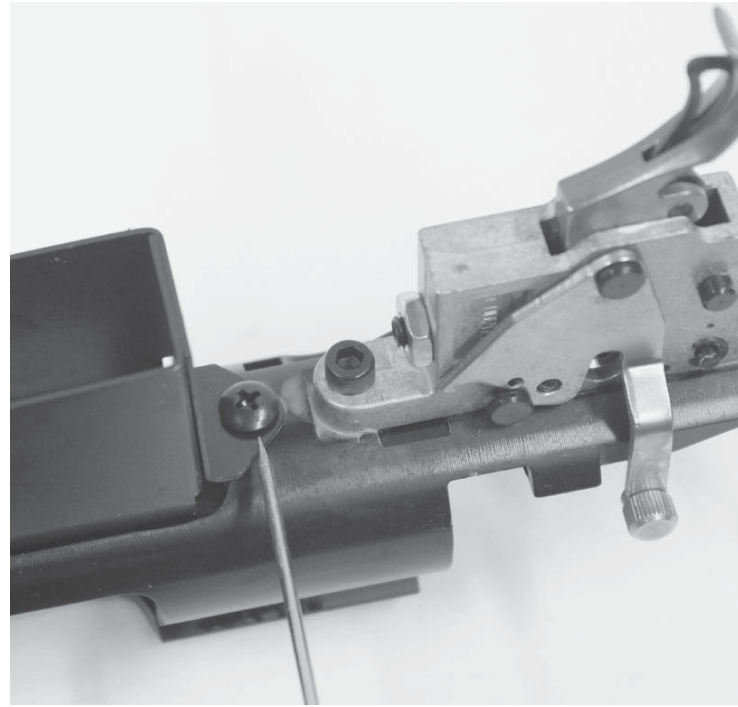


2. To remove the barreled action from the stock, remove the front and rear action screws. The barreled action can then be lifted from its bed. The magazine spring and follower are not contained and will be freed when the action is lifted.

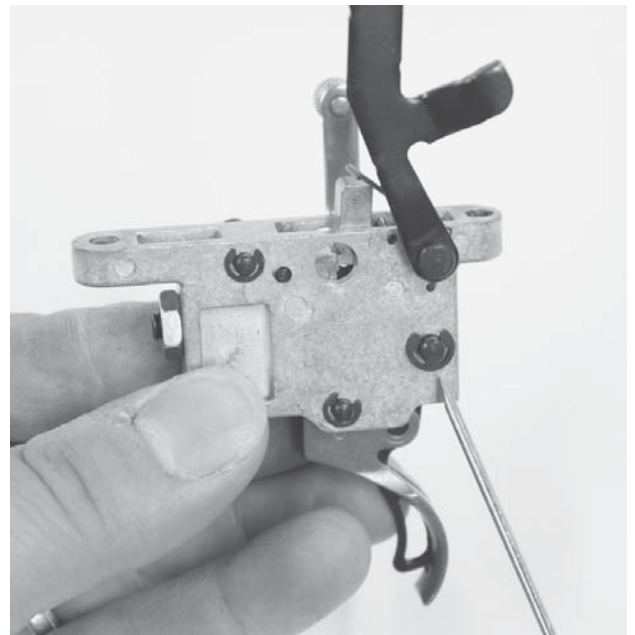
- 3.** The trigger guard can be removed, if necessary, by withdrawing the middle action screw out of the stock.



- 4.** The magazine box is held in place by this screw. Remove the screw and then rotate the box down slightly to remove it from the receiver. Note the small lock washer under the screw: do not lose it.

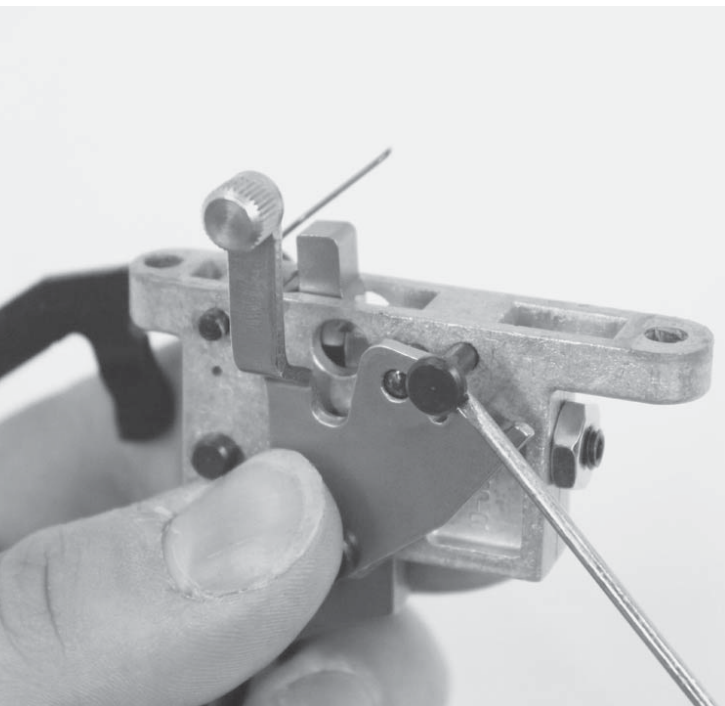


- 5.** Remove the two screws at the front and rear of the trigger housing to remove the housing from the receiver. Note that the rear screw is shorter than the front.

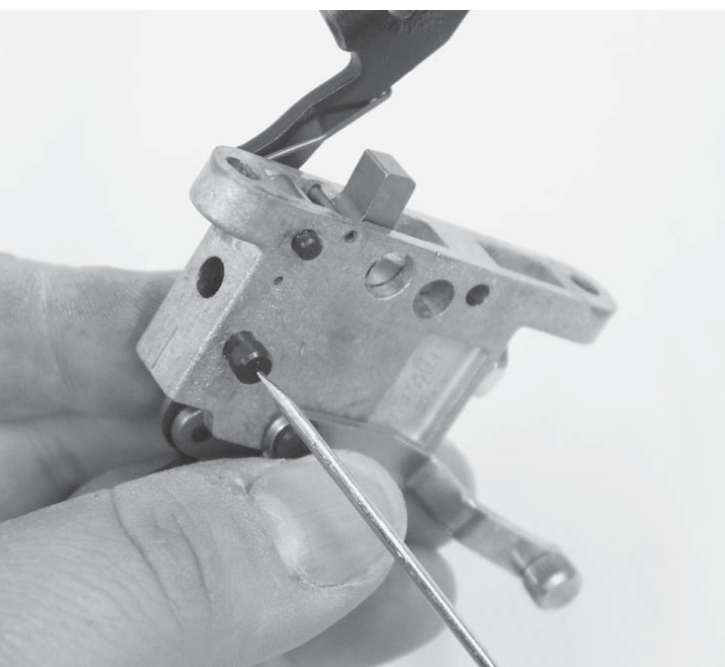
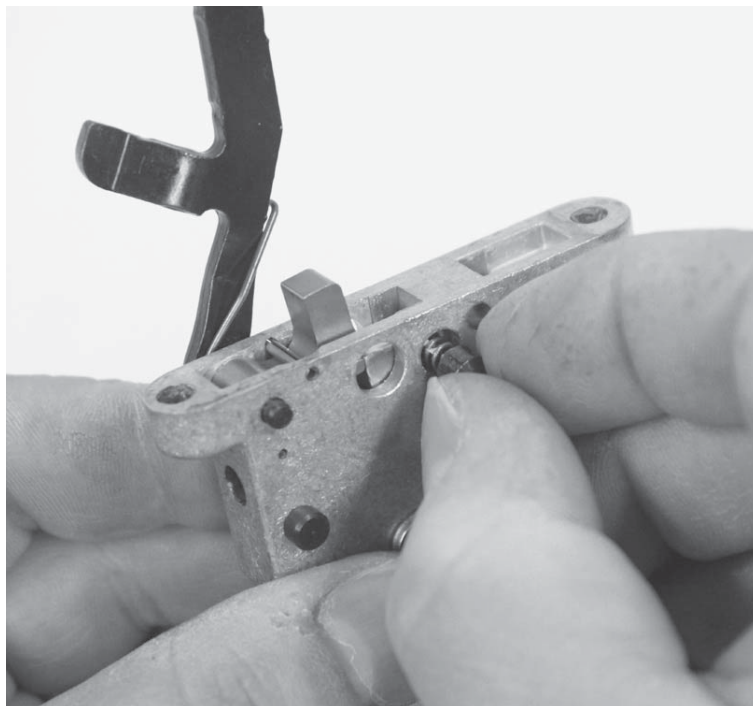


- 6.** Generally, trigger housings like this one need not be disassembled unless there is something horribly wrong. However, it can be done in this order: remove first the three E-clips on the left side of the housing and then the single clip on the right side.

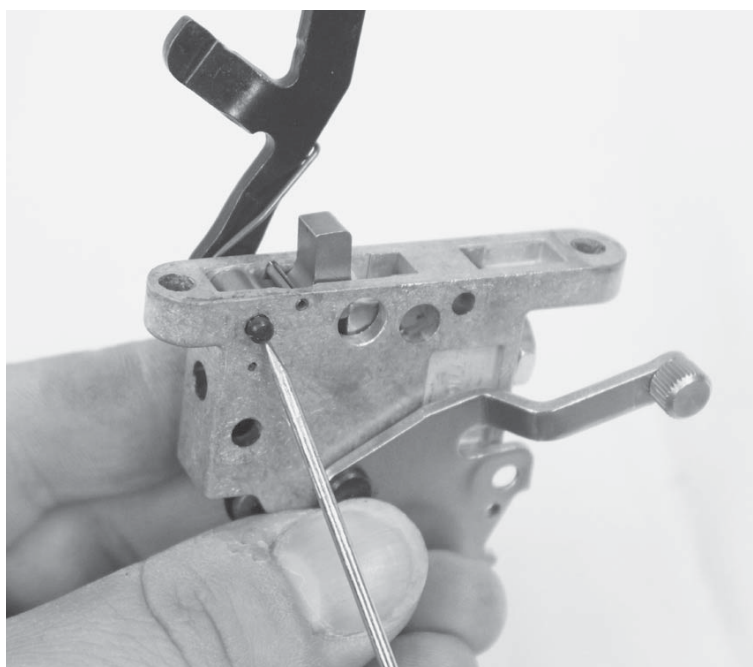
7. Remove this pin. It is a stop pin for the safety lever.



8. With the safety lever rotated forward and down, the large safety detent can now be removed.

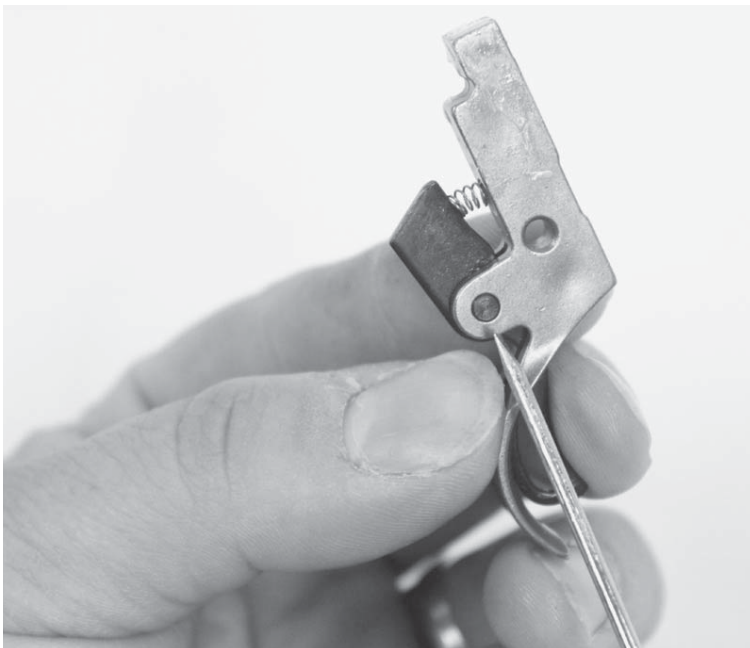
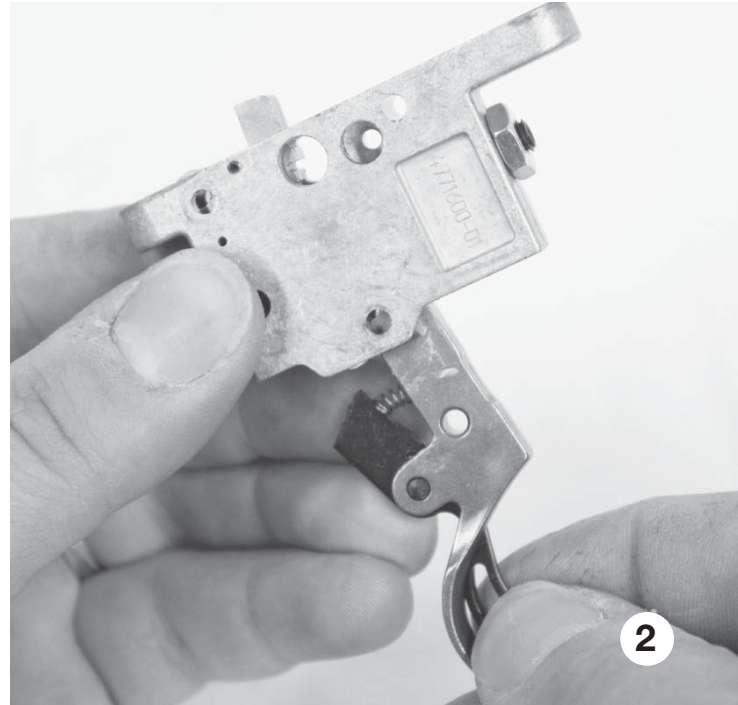
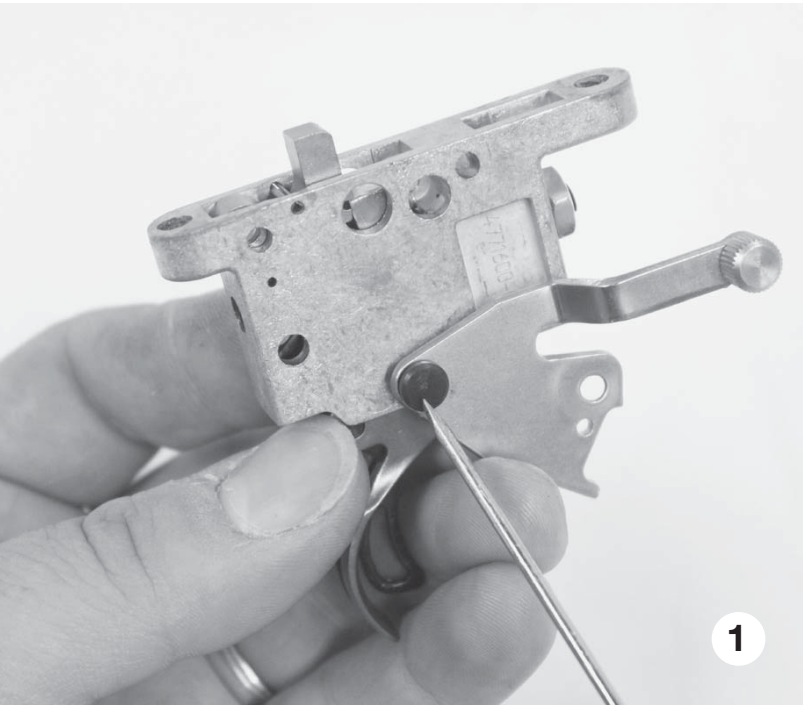


9. Remove this pin, which functions to block the trigger safety lever.

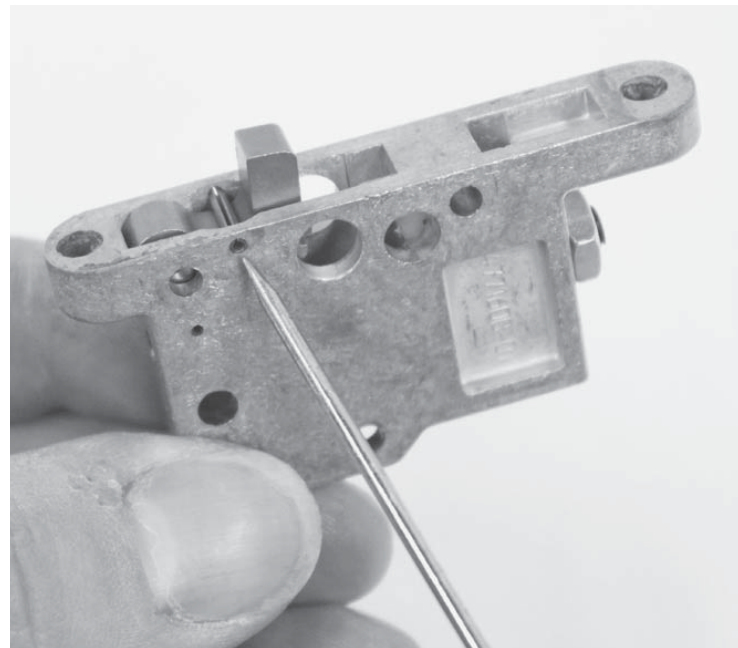


10. Remove the sear pin. This pin also retains the bolt stop and spring.

- 11.** Remove the trigger pin, which also serves as the safety lever pin (picture 1). Pull the trigger assembly down out of the housing (picture 2). The trigger return spring sits behind the weight adjustment screw in the front of the housing and will probably just drop out when the trigger is withdrawn downward.

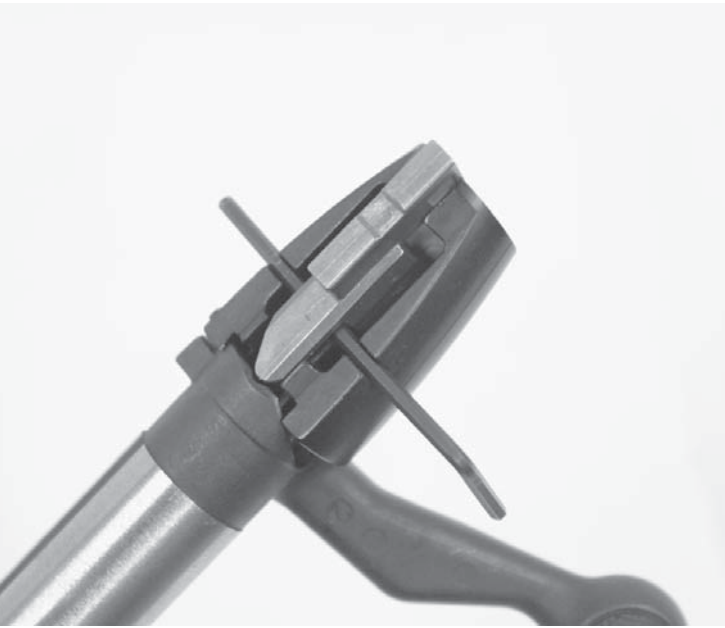


- 12.** The trigger safety pin can be easily pushed out, if necessary, to separate the trigger from its safety and spring.



- 13.** Drive out this roll pin to remove the sear and sear spring.

- 14.** To disassemble the bolt assembly, first ensure the bolt is locked “open.” Then pull back the cocking piece slightly so that a small probe or wrench or punch can be inserted through the notches on either side of the shroud to hold the piece back. The firing pin assembly can then be unscrewed from the bolt body. Note that left-hand threads are used to secure the firing pin assembly to the bolt body.



- 15.** The firing pin can be separated from the shroud by carefully removing the holding tool. Then the shroud is pushed forward while the firing pin is angled up and out of the shroud. Caution: while the firing pin is retained by a spring pin to the cocking piece, both pieces should be tightly controlled.

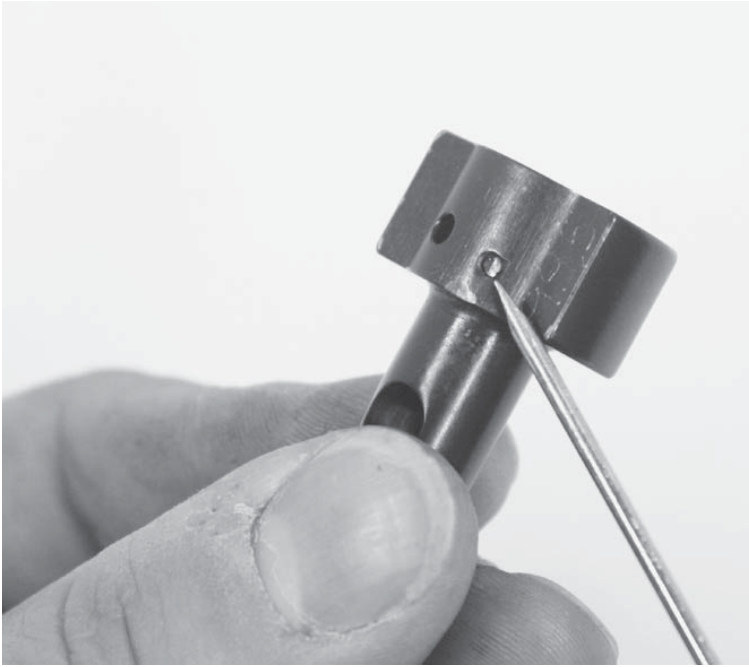


- 16.** Driving out this spring pin will allow the firing pin to be disassembled. The cocking piece, bushing, spring, and firing pin will separate energetically if they are not contained.

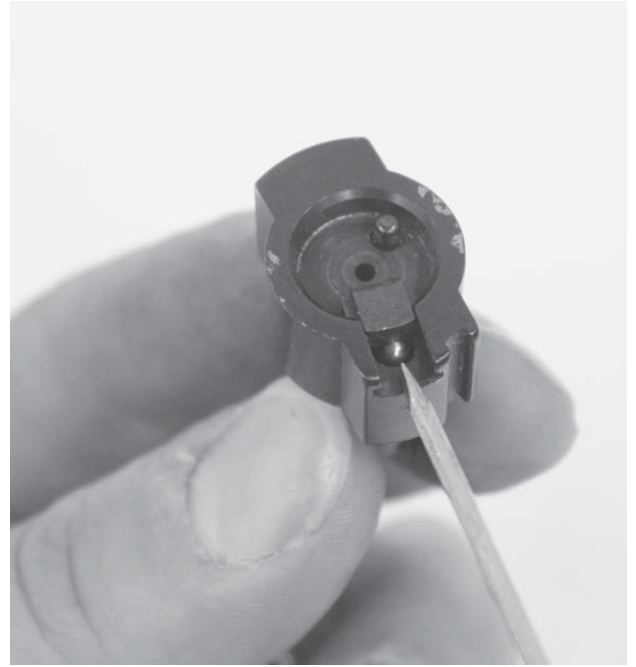


- 17.** Push out this pin to remove the bolt head and spring.

- 18.** To remove the ejector and spring, this pin should be driven out. It is splined and should be driven out in the direction of the spline.



- 19.** The extractor can be removed by pushing it in towards the center of the bolt face. Below the extractor is the spring and detent ball.



Reassembly Tips:

- 1.** It is easier to replace the trigger return spring if the adjustment screw is first removed and then reinserted after the trigger is in place, as this will allow the spring to fall further into the housing. Note that this may result in the trigger pull weight being altered.



Mauser Model 1898

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Mauser Model 1848 also apply to the following guns:

Argentine Model 1909 Rifle	Iranian Model 1949 Short Rifle
Argentine Model 1909 Cavalry Carbine	Mauser Model 1904 (Brazil, Chile, China)
Argentine Model 1909 Engineer Carbine	Mexican Model 1907
Brazilian Model 1908 Rifle	Mexican Model 1910
Brazilian Model 1908 Short Rifle	Mexican Model 1912
Browning High-Power Rifle	Mexican Model 1936
Chilean Model 1912	Paraguayan Model 1907 Rifle
Chinese "Chiang Kai-shek" (Mauser "Standard Model")	Paraguayan Model 1907 Carbine
Colombian Model 1912 Rifle	Peruvian Model 1909 Rifle
Costa Rican Model 1910 Rifle	Polish Model 98a Carbine
Czech Model 24 (VZ24)	Swedish Model 40
FN Supreme Mauser	Turkish Model 1903 Rifle
German Model 98a Carbine	Turkish Model 1905 Carbine
German Model 98b Carbine	Venezuelan Model 1910 Rifle
German Model G33/40 Carbine	Yugoslavian Model 1910 Rifle
Interarms Mark X	Yugoslavian Model 48 Rifle
Iranian Model 1930 Short Rifle	
Iranian Model 1938 Rifle	

Data: Mauser Model 1898
(Karabiner 98k)

Origin: Germany

Manufacturer: Various government arsenals

Cartridge: 7.92mm Mauser
(8x57mm Mauser)

Magazine capacity: 5 rounds

Overall length: 43.6 inches

Barrel length: 23.62 inches

Weight: 9 pounds

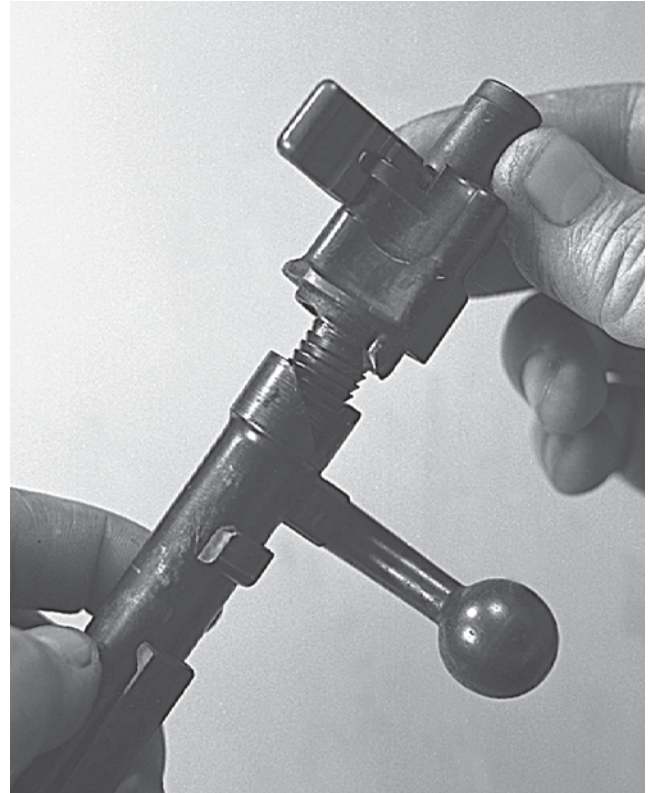
The classic Model 1898 was made in both military and sporting versions from 1898 to 1935, when the military rifle was redesigned to become the Model 98k, the famous Karabiner of WWII. After the war, countless numbers of 98k guns were brought in the U.S. as war souvenirs, and large quantities of stored guns are still being sold on the surplus market. The actions have always been popular as the basis for sporting rifles, while the full military guns in top condition are prizes for collectors. Many of today's finest commercial sporting rifles have action designs based on the original Mauser 98 system.

Disassembly:

1. Cycle the bolt to cock the striker, and turn the safety-lever up to the vertical position. Open the bolt, and move it toward the rear while holding the bolt stop pulled out toward the left. Remove the bolt from the rear of the receiver.

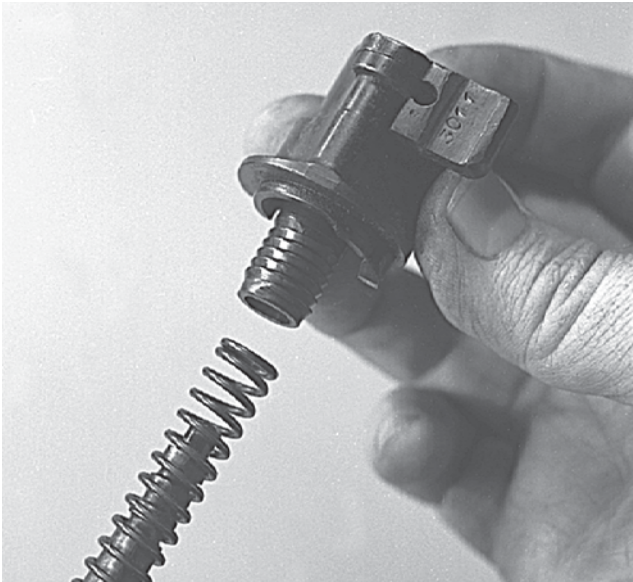


2. Depress the bolt sleeve lock plunger, located on the left side, and unscrew the bolt sleeve counter-clockwise (rear view), taking care not to trip the safety-lever from its vertical position. Remove the bolt sleeve and striker assembly toward the rear.

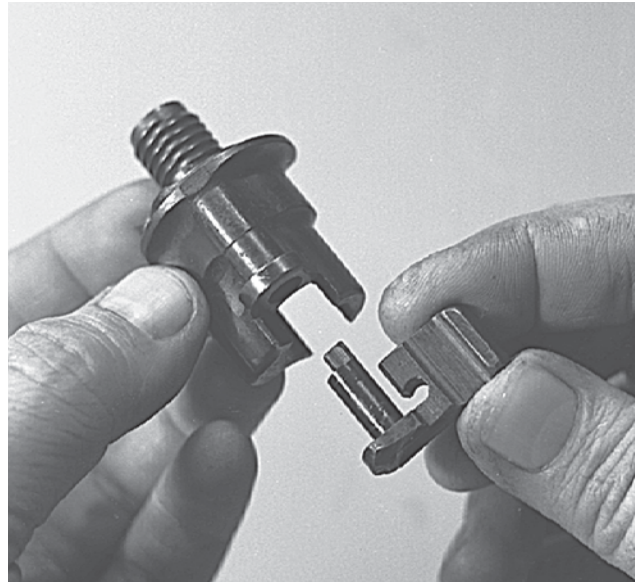


3. If the round takedown bushing is still in the side of the buttstock, insert the firing pin section of the striker shaft into the hole in the center of the bushing to hold the assembly for takedown. If the gun does not have the original stock and bushing, grip the front of the striker in a vise. Either way, take care to exert no side pressure. Holding the bolt sleeve against the tension of the striker spring, turn the safety-lever back to off-safe position, and push the bolt sleeve toward the front until the rear edge of the sleeve clears the front of the cocking piece underlug. Turn the cocking piece a quarter-turn in either direction, and remove it from the rear end of the striker shaft. **Caution:** Keep a firm grip on the bolt sleeve, holding the compressed striker spring.

- 4.** Slowly release the spring tension, moving the bolt sleeve off the rear of the striker shaft, and removing the spring toward the rear.



- 5.** Turn the safety-lever over to the right side (clockwise, rear view), and remove it toward the rear.



- 6.** To remove the bolt sleeve lock plunger and its spring, push the plunger inward, and turn it to bring its retaining stud into the exit track. Remove the plunger and spring toward the front.

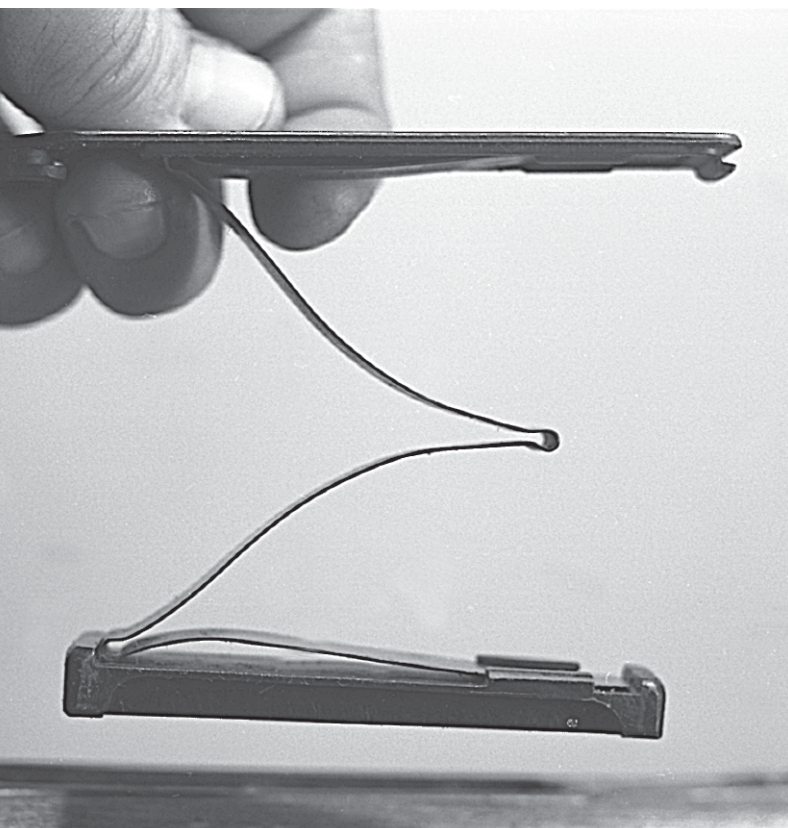
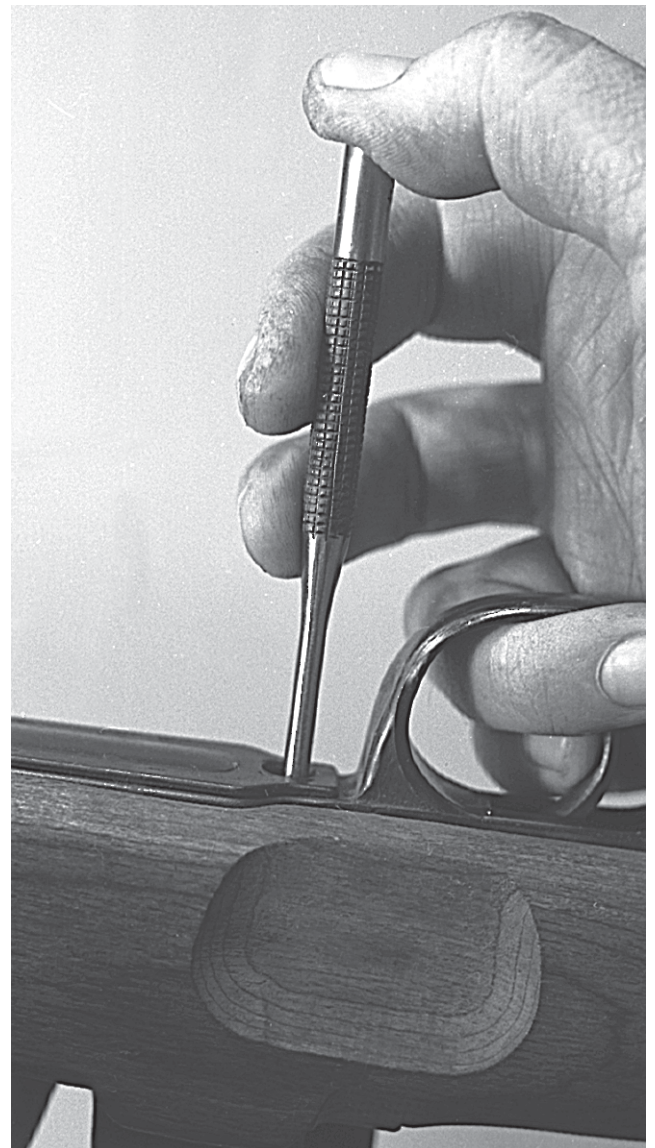


- 7.** If you have the Brownells extractor pliers, use them to raise the front of the extractor just enough to clear the groove at the front of the bolt. A screwdriver inserted beneath the extractor can also do this. With the extractor lifted, turn it clockwise (rear view) until it is aligned with the grooveless area at the front of the bolt.



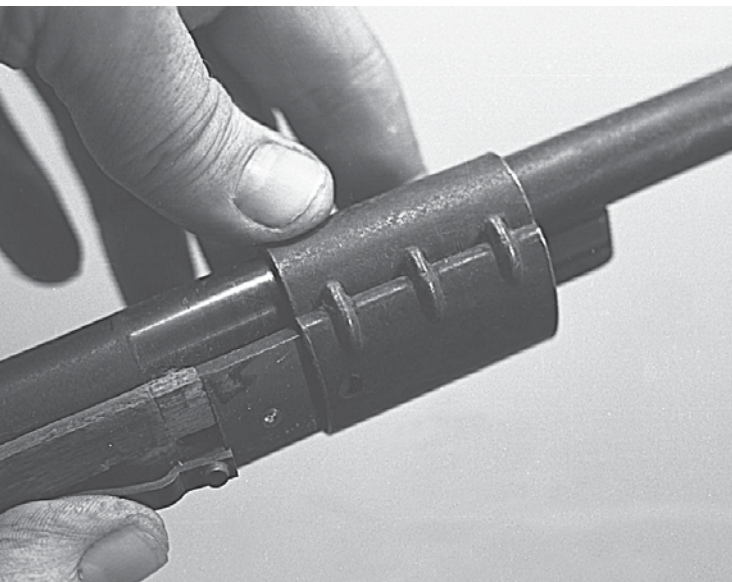
- 8.** Push the extractor straight off toward the front. The mounting ring is not removed from the bolt in normal disassembly.

- 9.** Insert a medium-sized drift punch in the hole at the rear of the magazine floorplate, and depress the floorplate latch. Move the floorplate toward the rear.

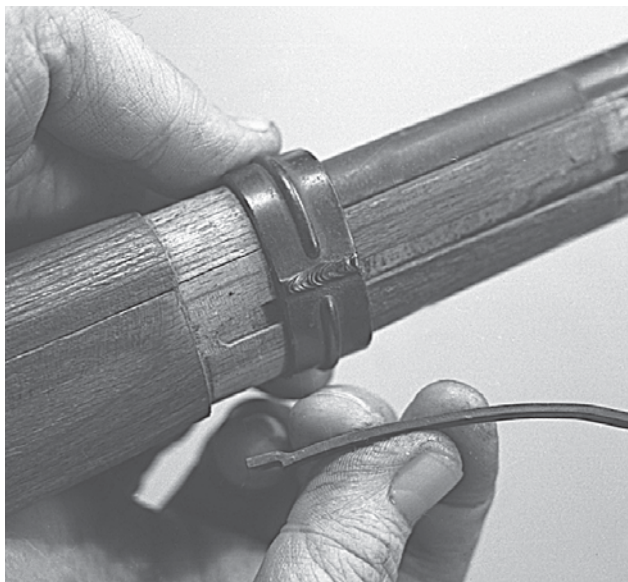


- 10.** Remove the magazine floorplate, spring, and follower downward. The spring is easily detached from the plate and follower.

- 11.** If the end section of cleaning rod is present in the front of the stock, unscrew it and remove it. Depress the front barrel band latch and slide the barrel band off toward the front.

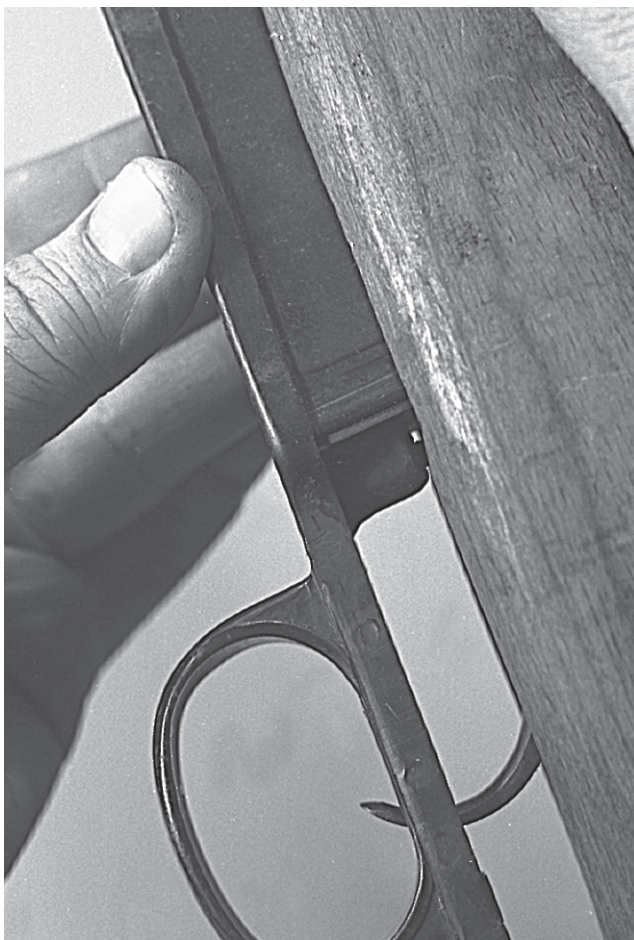


- 12.** The spring latch is now free to be removed from its recess in the stock, and the rear barrel band can be slid off forward and removed. The upper hand-guard wood can also be taken off at this time.

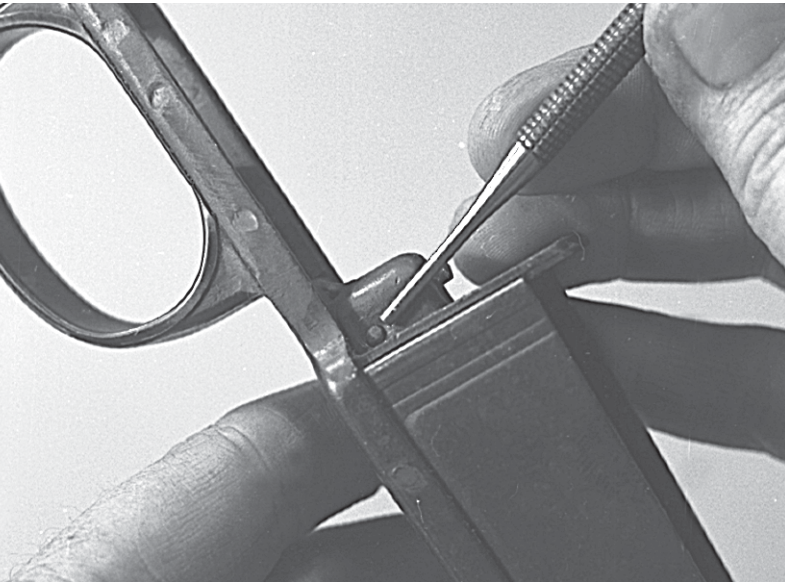


- 13.** Remove the lock screws, and take out the larger vertical screws on the underside of the stock at the front and rear of the trigger guard/magazine housing.

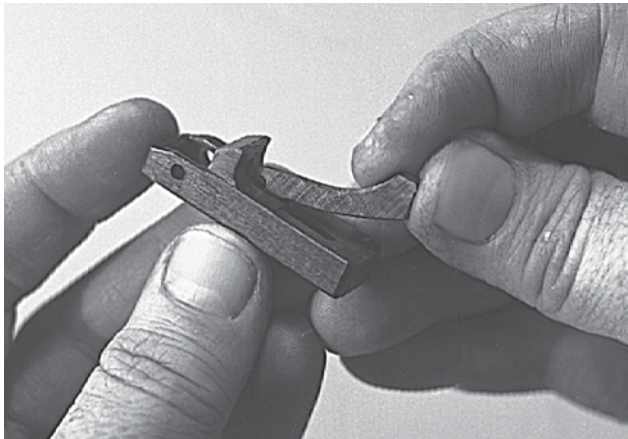
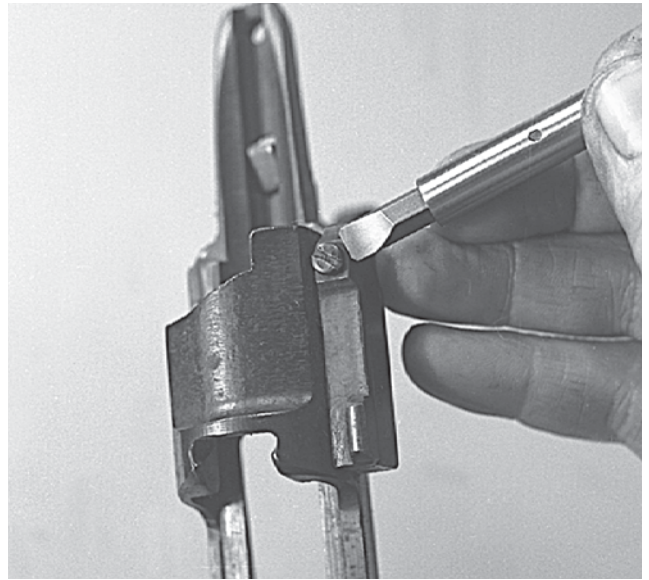
- 14.** Remove the trigger guard/magazine housing downward, and separate the action from the stock.



- 15.** The magazine floorplate latch is retained by a cross pin in the trigger guard/magazine housing, and is removed downward. **Caution:** *This is a very strong spring, so control the plunger and ease it out.*



- 16.** Remove the small vertical screw at the left rear of the receiver, the pivot for the bolt stop. Then remove the bolt latch/ejector assembly toward the left side.

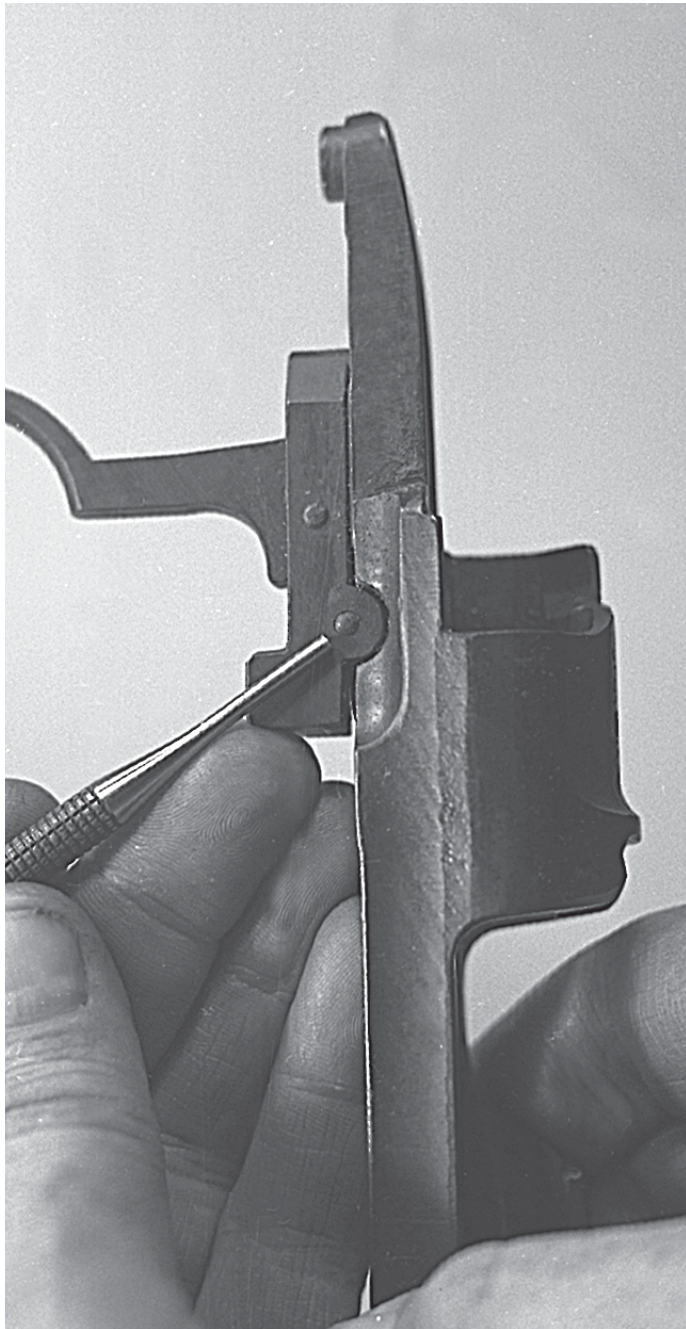


- 17.** Remove the ejector toward the front.



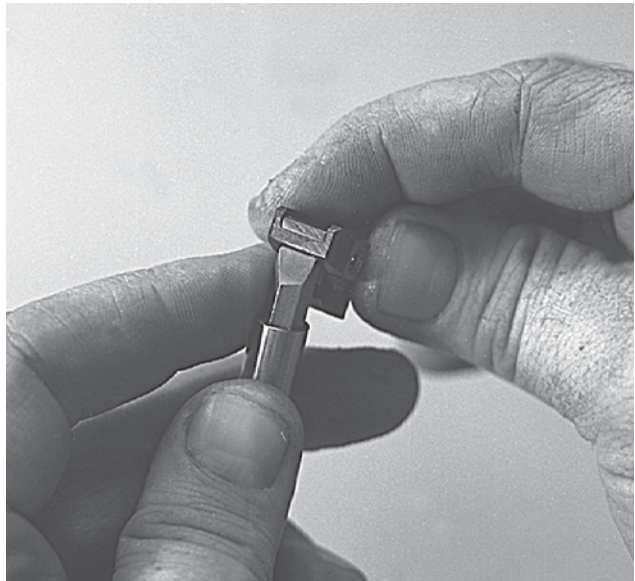
- 18.** To remove the combination bolt latch and ejector spring, set a drift punch against its rear edge, and drive it out toward the front. When the rear tip has cleared the cross piece at the rear of the bolt latch, the tip of the spring will move inward, and can then be levered out toward the front with a screwdriver blade.

- 19.** Drifting out the cross pin that retains the sear will allow removal of the sear, sear spring, and the attached trigger downward. The trigger cross pin can be drifted out to separate the trigger from the sear.



Reassembly Tips:

- 1.** When replacing the combination bolt stop and ejector spring, it will be necessary to insert a screwdriver or some other tool to lift its rear tip onto the cross piece at the rear of the bolt stop, as the spring is driven into place.

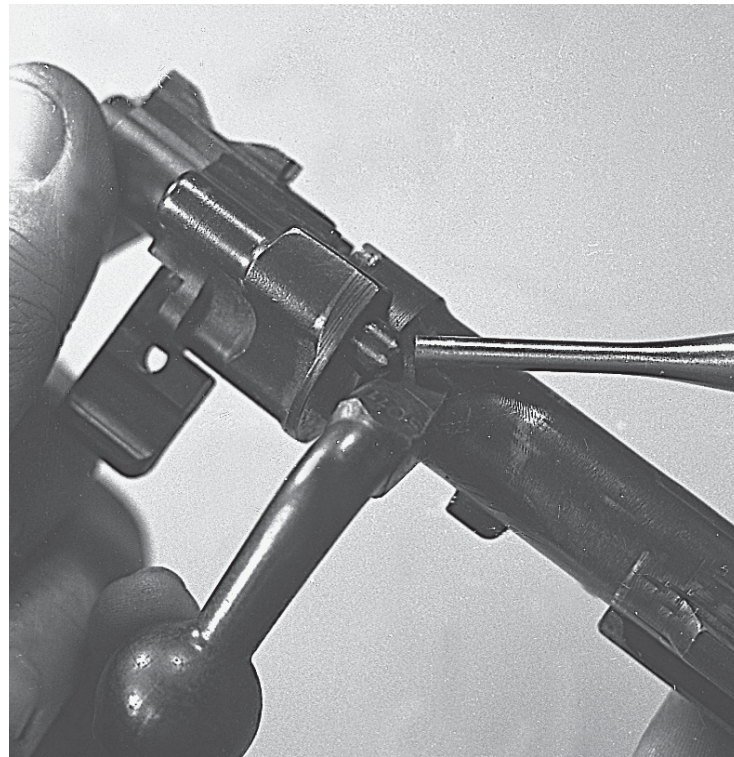


- 2.** When replacing the extractor on the bolt, be sure the mounting ring flanges are aligned with the ungrooved area at the front of the bolt. Use the Brownells pliers or some other tool to compress the ring flanges, and slide the extractor onto the ring.

3. With the extractor pliers or a screwdriver blade, lift the front of the extractor while depressing the center of its tail, to lift the underlug at the front over the edge of the bolt face. When the underlug is aligned with the groove, turn the extractor back toward the left (counter-clockwise, rear view), until it covers the right lug of the bolt.



4. Before the bolt sleeve and striker assembly can be put back into the bolt, the striker must be moved to the rear and the safety turned into the vertical on-safe position. As the assembly is turned into place, the sleeve latch plunger must be pushed in twice—once to clear the bolt handle, and again as it enters its locking notch.





Mossberg 100 ATR

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the Mossberg 100 ATR also apply to the following guns:

Mossberg 4x4

Mossberg MVP

Data: Mossberg 100 ATR

Origin: United States

Manufacturer: Mossberg, North Haven, CT

Cartridge: .243 Win., .7mm-08 Rem., .308 Win.

Magazine Capacity: 5 rounds

Overall Length: 42 inches

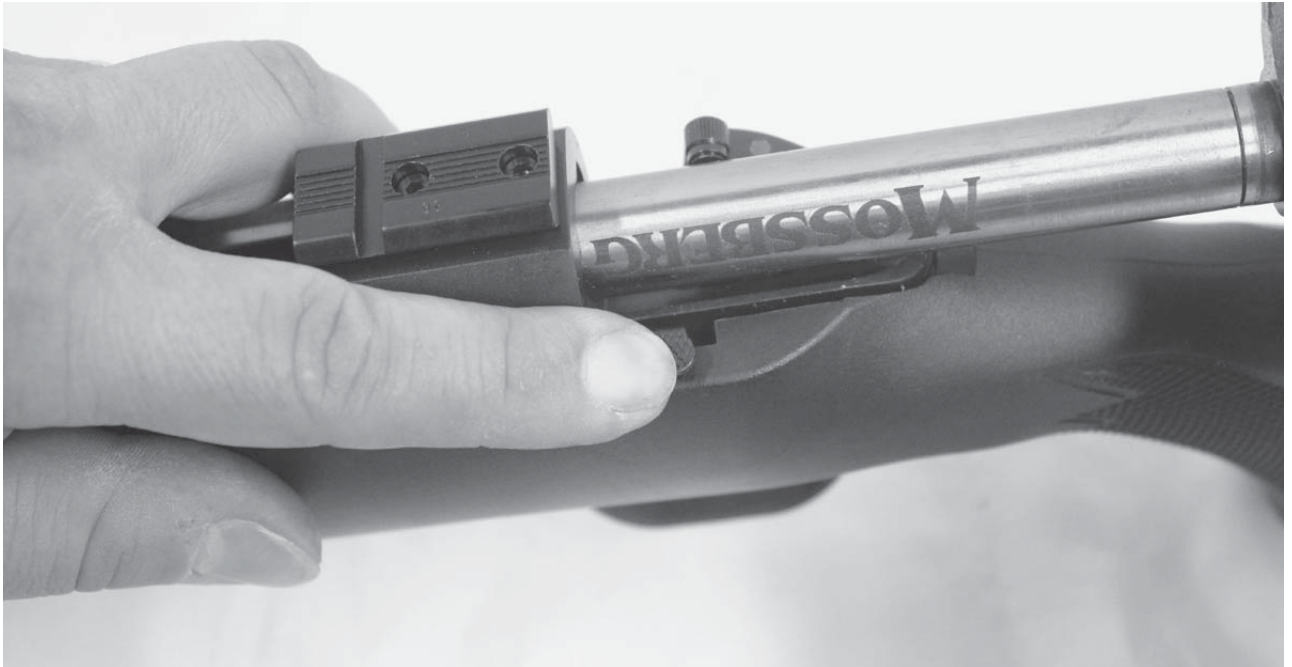
Barrel Length: 22 inches

Weight: 7 pounds

The Mossberg lines of centerfire bolt-action rifles are fairly recent. The 4x4 types are higher-end models with nice wood stocks and sleeker appearances and finishes. The MVP is a similar model designed for target/varmint work that uses AR-15 detachable magazines. The ATR series is similarly designed, but is meant to be a low price point rifle. Blind magazines, inexpensive synthetic stocks, and basic finishes typify the ATR line, but the guns are otherwise (aside from the magazine boxes), inherently the same as the 4x4 and MVP designs. Like a growing number of rifles, these incorporate a passive safety lever built into the trigger to prevent unintentional movement of the trigger.

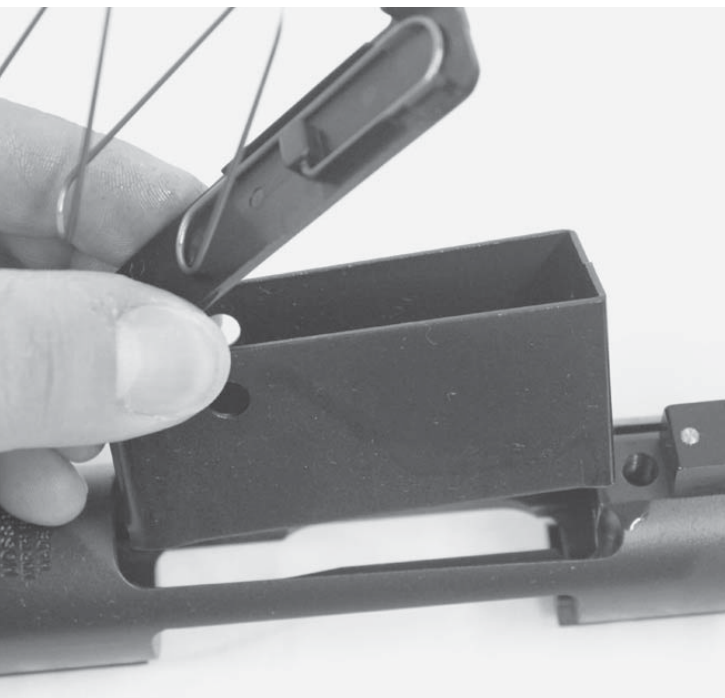
Disassembly:

1. With the bolt open, depress the bolt catch downward, then pull the bolt rearward from the receiver.

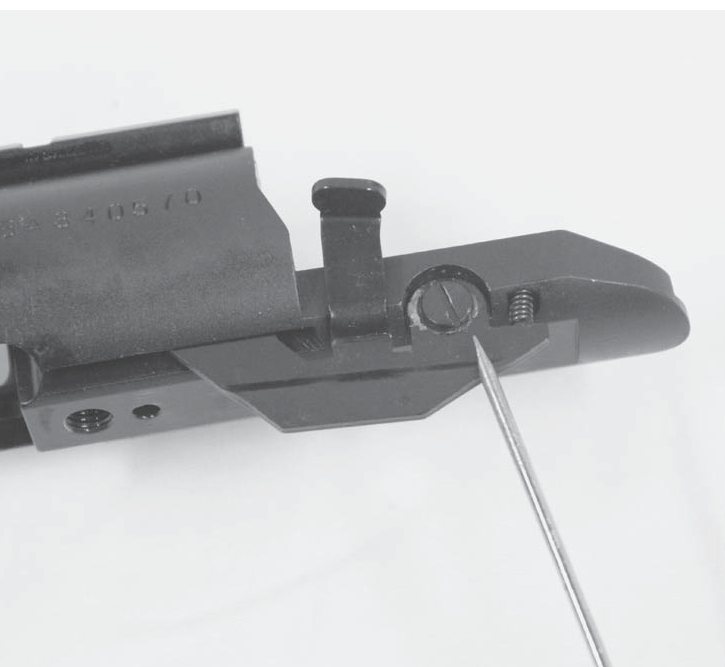
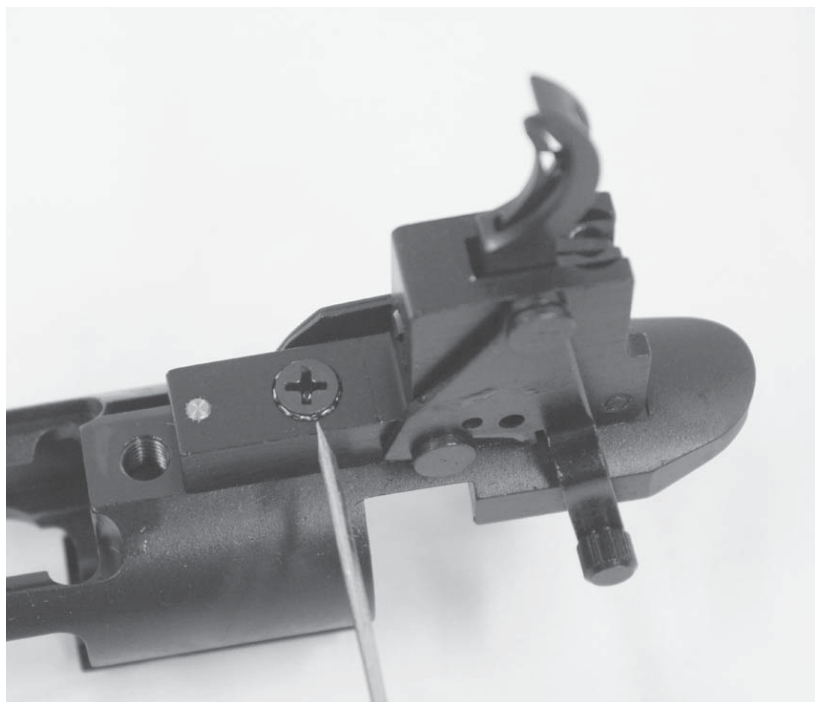


2. To remove the barreled action from the stock, remove the front and rear action screws. The barreled action can then be lifted from its bed.

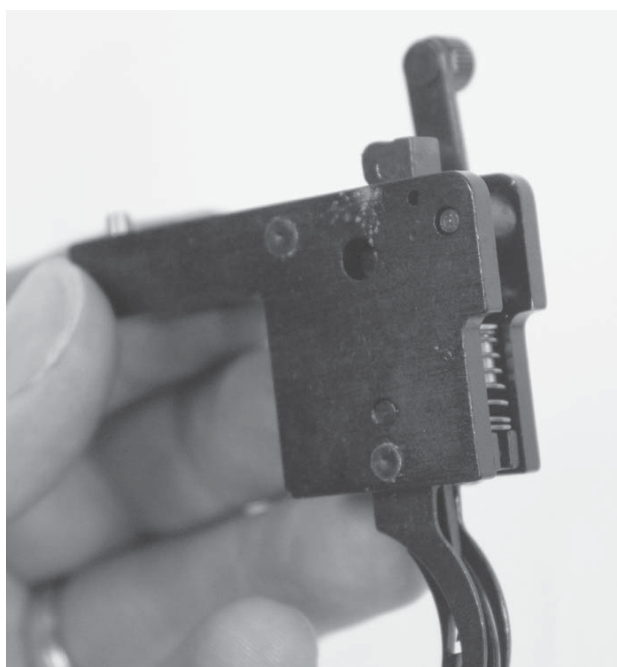
- 3.** The magazine spring and follower are not contained and will be freed when the action is lifted. They can simply be lifted from the receiver.



- 4.** Remove this screw to separate the trigger housing from the receiver.

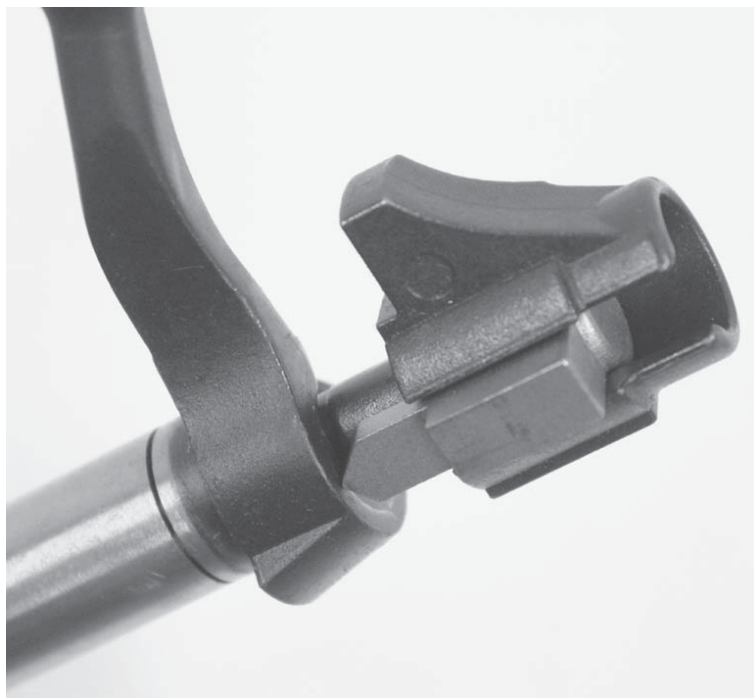


- 5.** The bolt stop can be removed by taking out this screw. The spring behind it should be controlled as the piece is removed.

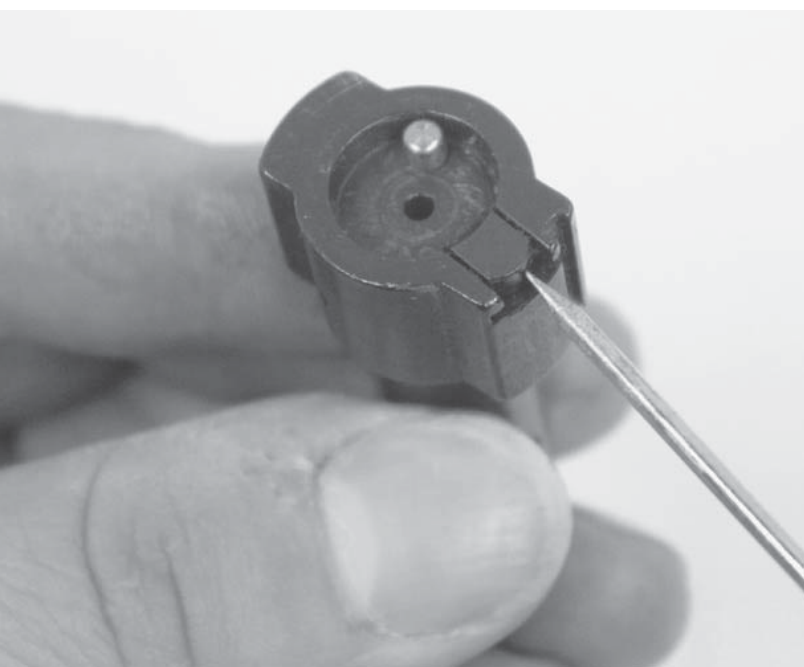


- 6.** The trigger housing should not be disassembled. All three pins are either riveted or staked in place, and new pins would be required for reassembly. Replace the entire assembly if needed.

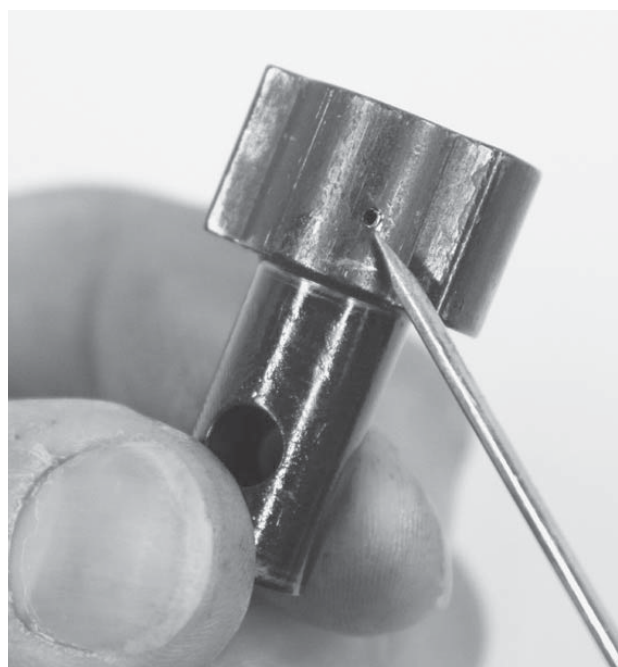
- 7.** To disassemble the bolt, rotate the bolt shroud clockwise so that the projection on the shroud is aligned with the bolt handle. Then pull the firing pin assembly from the bolt body.



- 8.** Push out the bolt pin to free the bolt head from the bolt body.

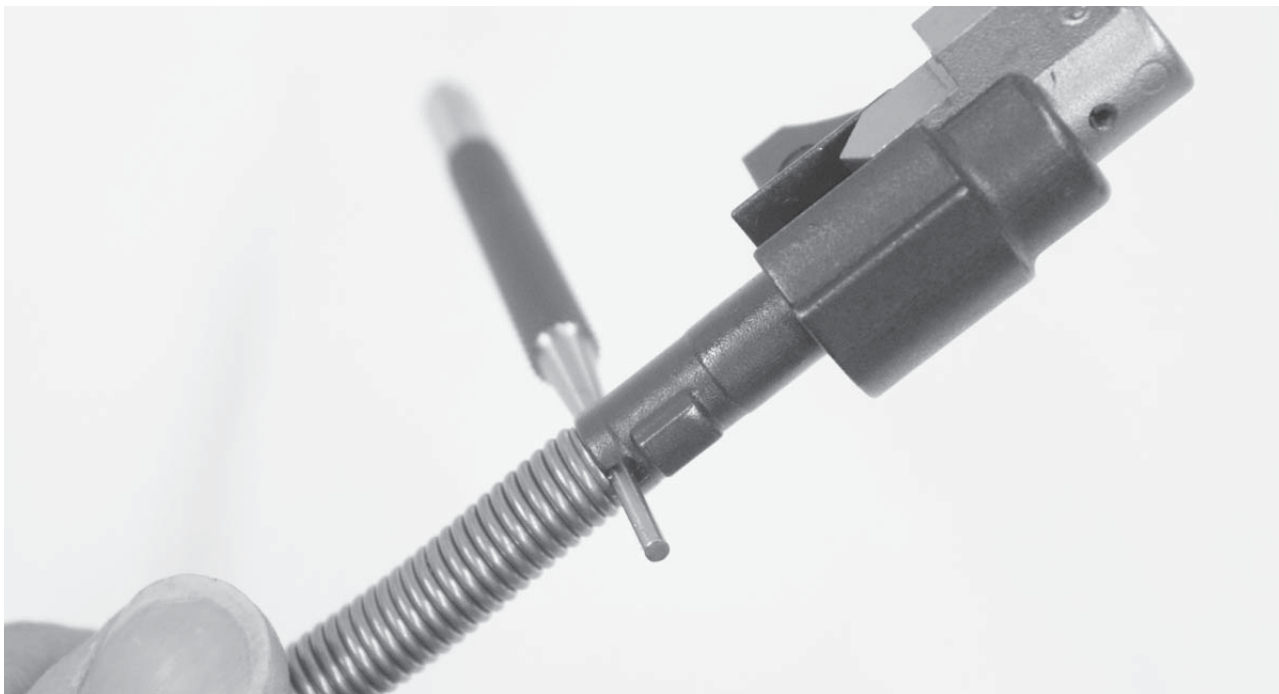


- 9.** The extractor can be pushed out towards the bolt face center. Below it is the detent ball and spring.



- 10.** Drive out this pin to remove the ejector and spring.

- 11.** To disassemble the firing pin assembly, first compress the firing pin spring until the hole in the pin aligns with the notch in the bolt shroud and insert a punch to retain the spring in a compressed state. With the firing pin spring held compressed, drive out the retaining spring pin (upper right corner of picture) to free the cocking piece. The cocking piece and bolt shroud can then be removed from the firing pin and spring. Also note that a small bushing is present at the forward end of the firing pin spring.



Reassembly Tips:



- 1.** There is a projection punched into the bolt body to guide the bolt head. Align the bolt head's notch with this projection when reinstalling the bolt.

Mossberg Model 479

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Mossberg Model 479 also apply to the following guns:

Mossberg Model 472

Mossberg Model 472 Carbine

Mossberg Model 472BAS

Mossberg Model 472PRA

Mossberg Model 479PC

Mossberg Model 479RR

Mossberg Model 472 Brush Gun

Mossberg Model 472BA

Mossberg Model 472PCA

Mossberg Model 472SAB

Mossberg Model 479PCA

Mossberg Model 479SC

Data: Mossberg Model 479

Origin: United States

Manufacturer: O.F. Mossberg & Sons,
North Haven, Connecticut

Cartridges: 30-30 and 35 Remington

Magazine capacity: 6 rounds

Overall length: 38-1/2 inches

Barrel length: 20 inches

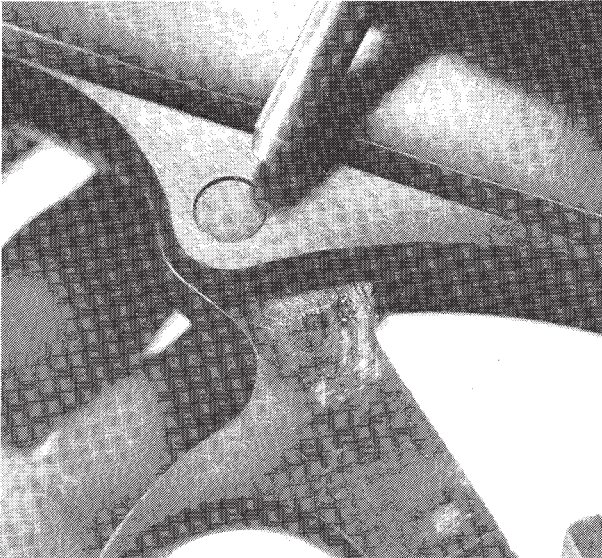
Weight: 7-1/2 pounds

The original version of this gun, the Model 472, was first offered in 1973. In 1979, a slight redesign changed the designation to Model 479. With different model numbers, the gun has also been made for Western Auto Stores and Montgomery Ward. Mechanically, all of these are essentially the same, and the instruction will apply. The two most notable features are the manual hammer-block safety and the mounting of the trigger in the lever, rather than in the receiver.

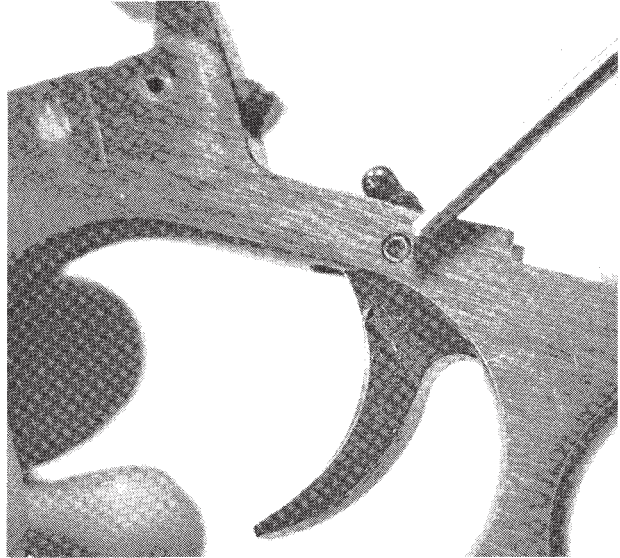


Disassembly:

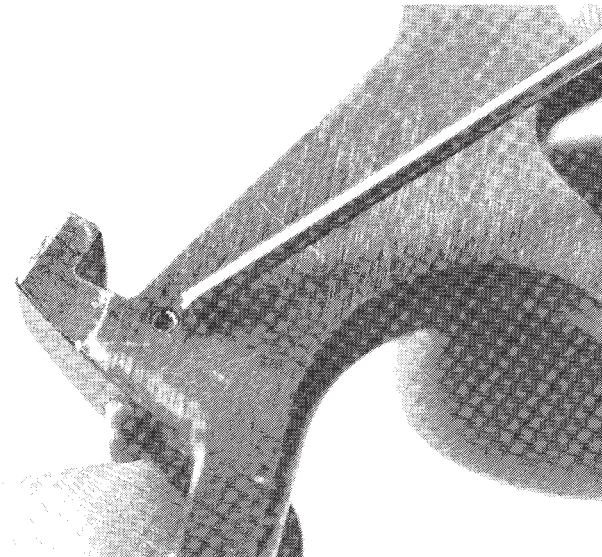
1. The lever pivot cross pin is retained by a plunger and spring inside its mount. Open the action about halfway, and use a non-marring punch to drift out the lever pivot in either direction. Remove the lever downward.



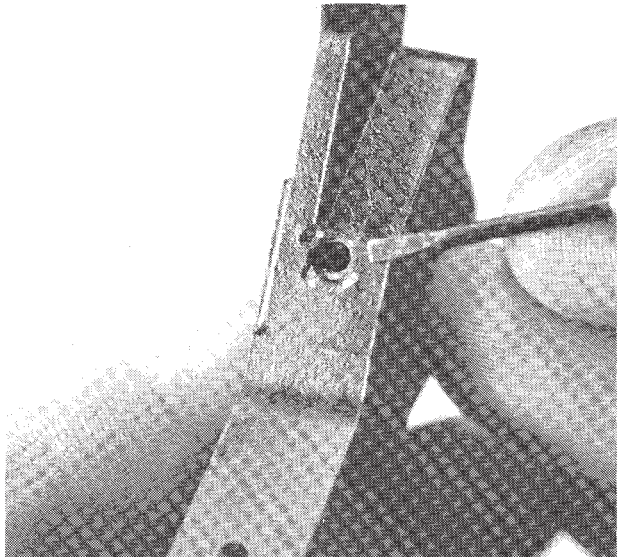
2. The trigger is retained in the lever by a roll cross pin. When drifting out the pin, take care to restrain the trigger spring and plunger, and ease them out. The trigger is removed downward, into the interior of the guard.



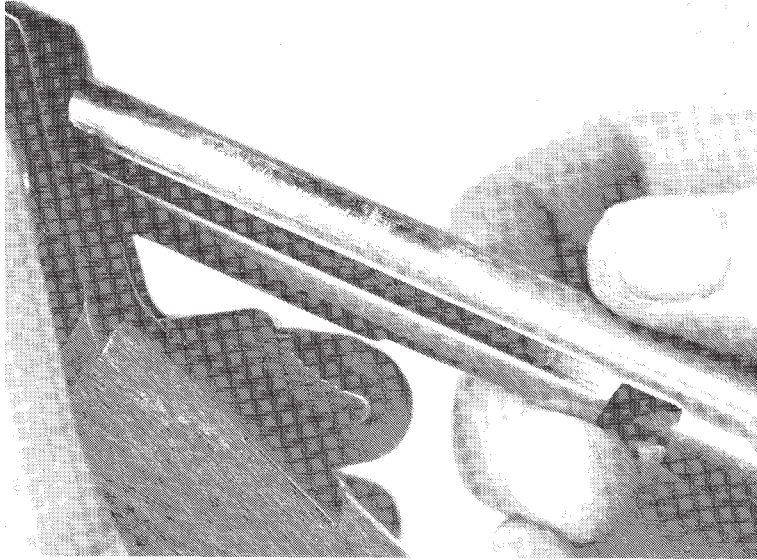
3. The lever latch plunger and spring are retained by a roll cross pin. The spring is quite strong, so restrain the parts and ease them out.



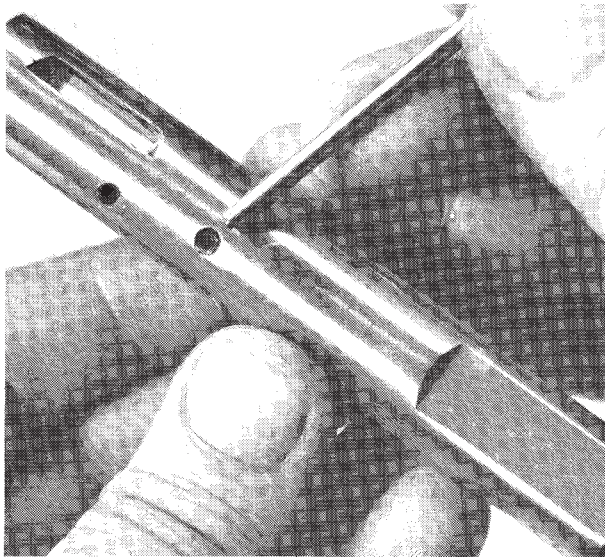
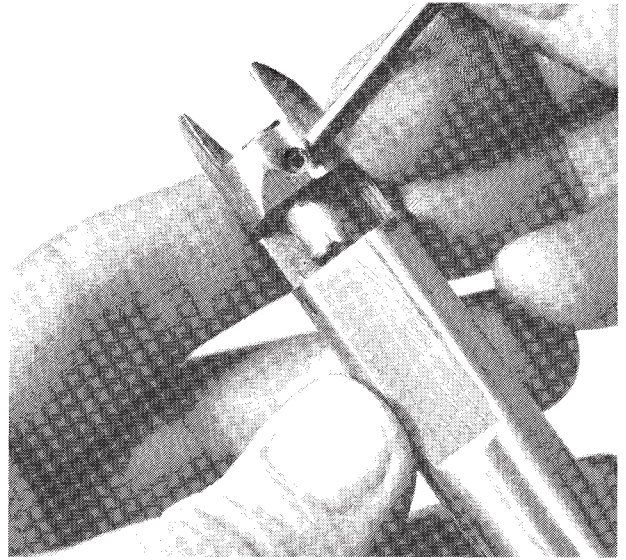
4. The lever pivot retaining plunger and its spring are retained in their hold above the pivot hole by a stake mark at the edge of the hole. Removal is not recommended in normal disassembly. If necessary for repair, insert a tapered drift punch to expand the staked edge to the side.



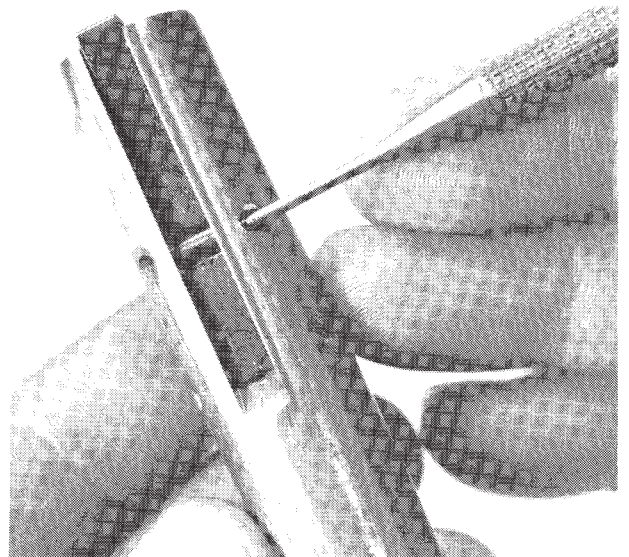
- 5.** Removal of the lever will release the bolt, and it can be taken out toward the rear. Holding the hammer back beyond its normal full-cock position will ease bolt removal.



- 6.** Drifting out the vertical roll pin at the rear of the bolt will release the striker and its spring for removal toward the rear.

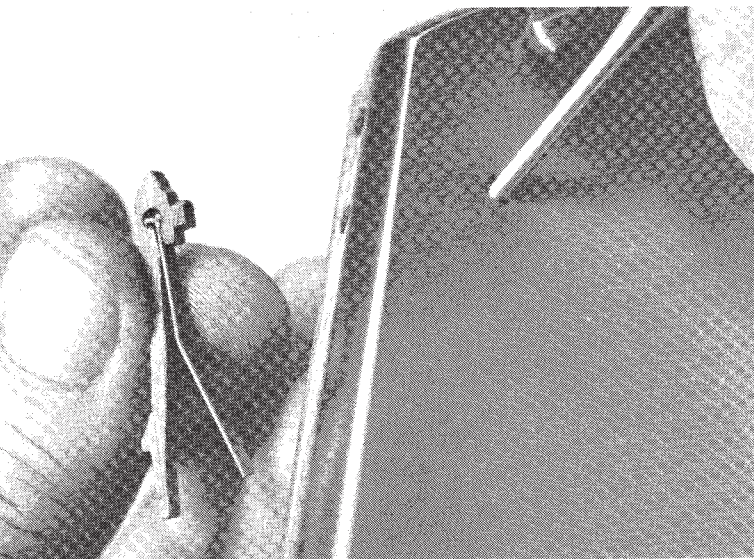


- 7.** The firing pin is retained by a vertical roll pin on the right side of the bolt, just to the rear of the extractor. The firing pin is removed toward the rear.

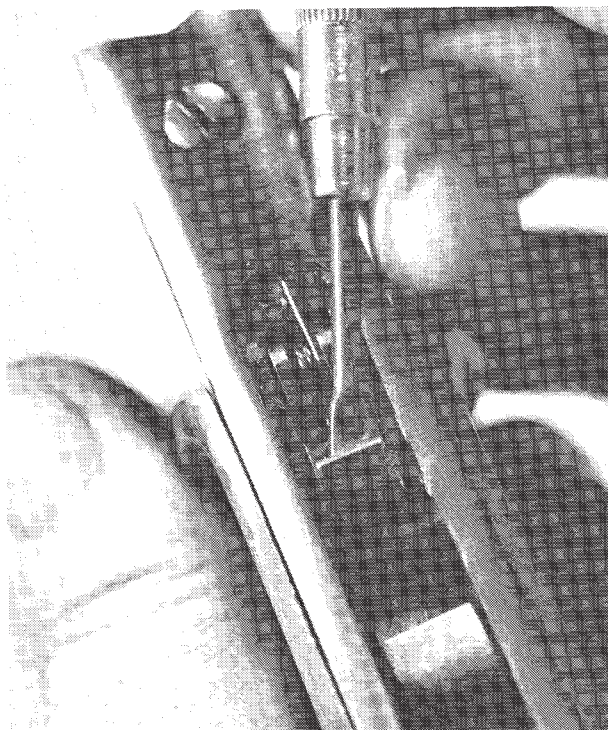
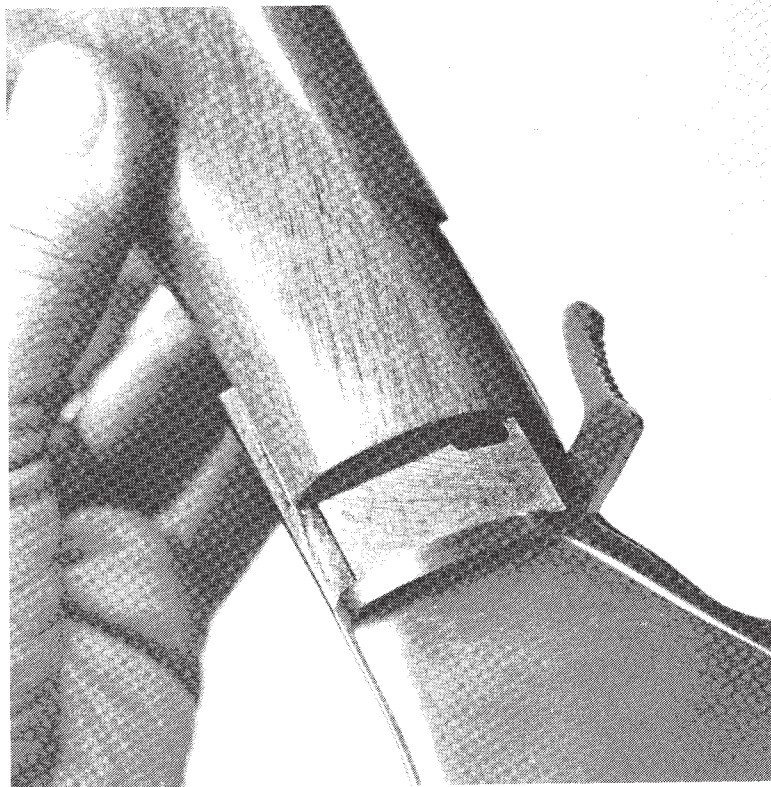


- 8.** The extractor, which is its own spring, is retained on the right side of the bolt by a vertical pin on the right side of the bolt. Drifting out the pin will allow removal of the extractor toward the right.

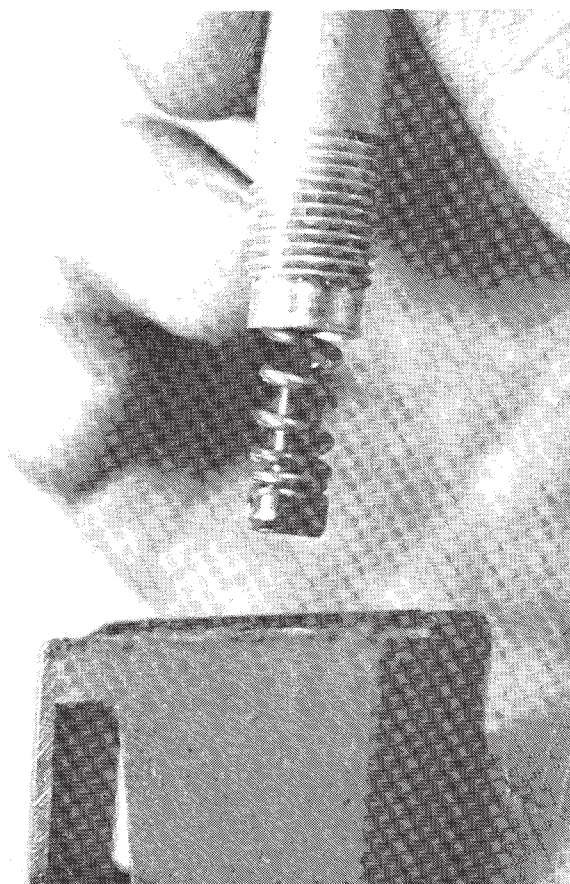
- 9.** Push the ejector mounting stud out of its hole in the left side of the receiver, and remove the ejector and its attached spring from inside. The spring is staked in place, and should be removed only for breakage replacement.



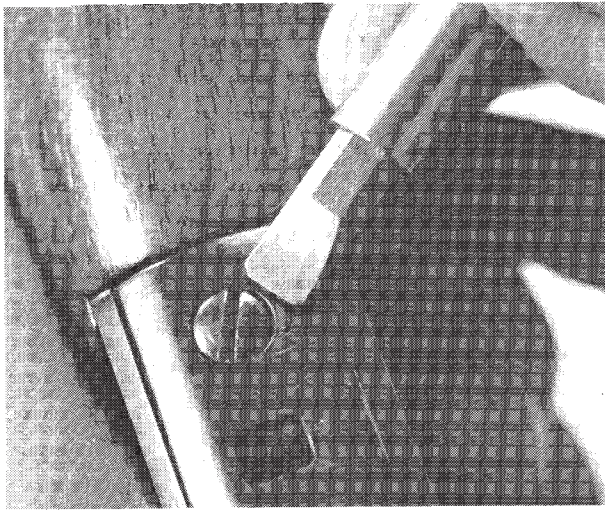
- 10.** The buttstock is retained by a through-bolt from the rear. The bolt head is not deep in the stock, and after removal of the buttplate an ordinary large screwdriver can be used. Remove the bolt, and take off the stock toward the rear.



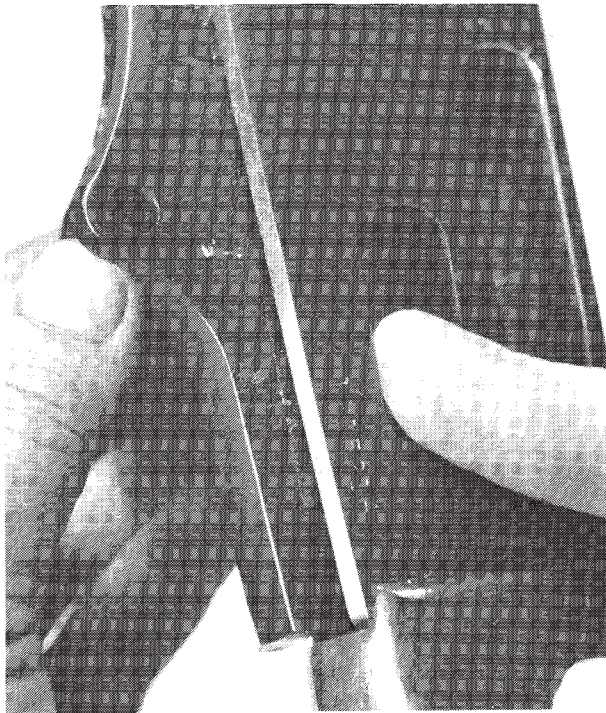
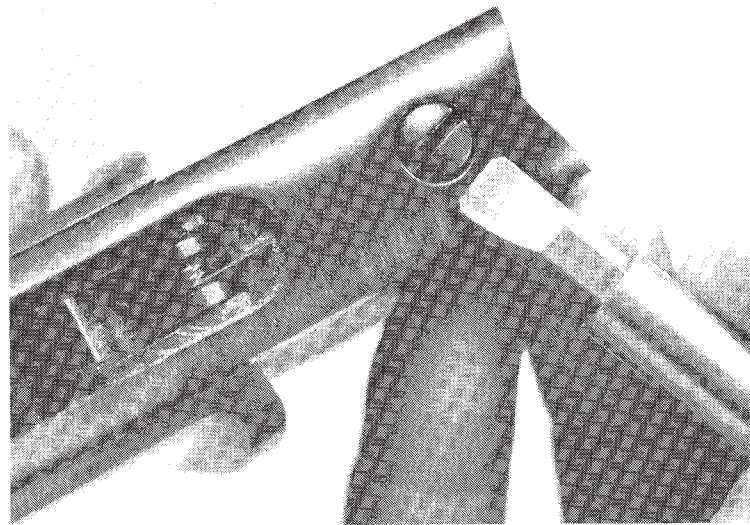
- 11.** Restrain the hammer, and insert a screwdriver to pull the front of the sear downward. Ease the hammer down to the fired position.
- 12.** With large parallel pliers or a wrench of proper size, unscrew the hammer spring housing and remove it from the rear of the receiver, along with the spring and plunger it contains.



- 13.** Remove the vertical screw on the underside at the forward end of the sub-frame.

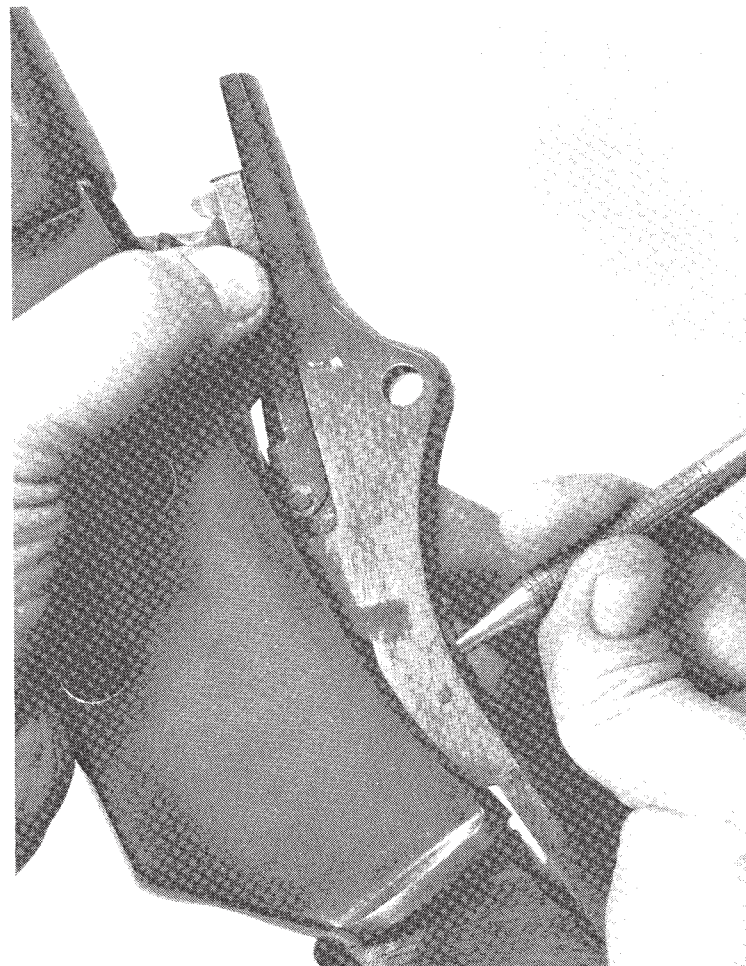


- 14.** Remove the vertical screw at the rear of the sub-frame.

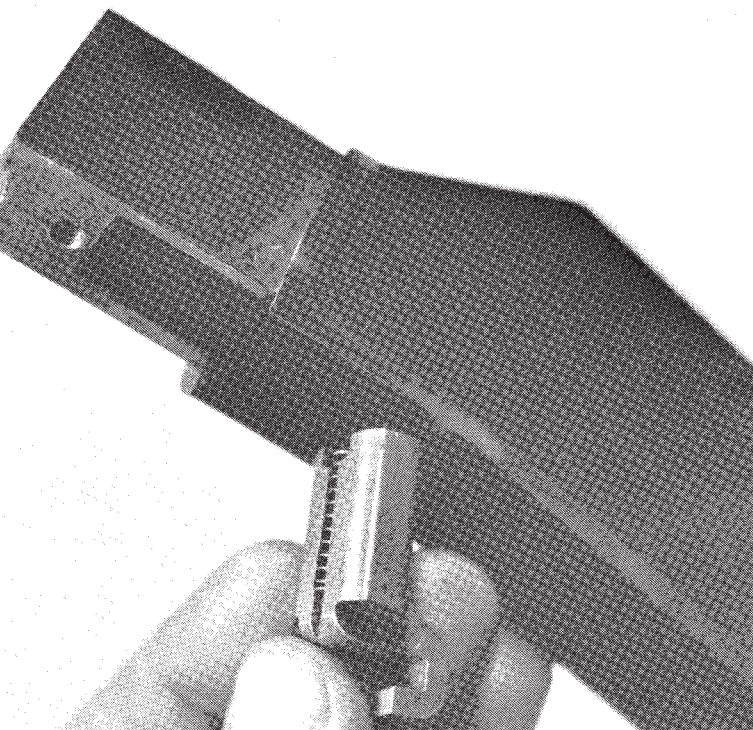


- 15.** With the carrier (lifter) in lowered position, push in the loading gate until it clears its opening in the receiver. Move the sub-frame downward a short distance, just clear of the receiver.

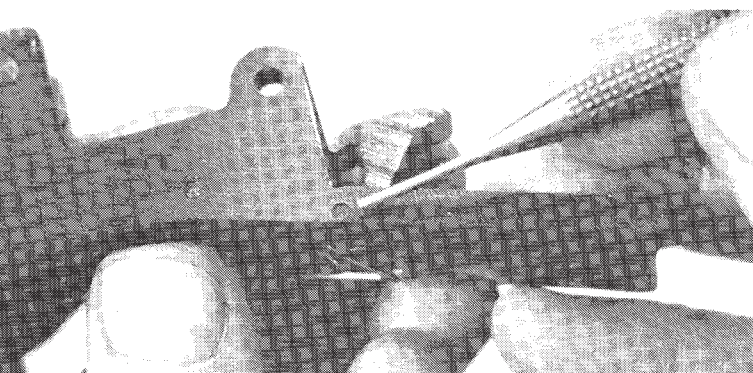
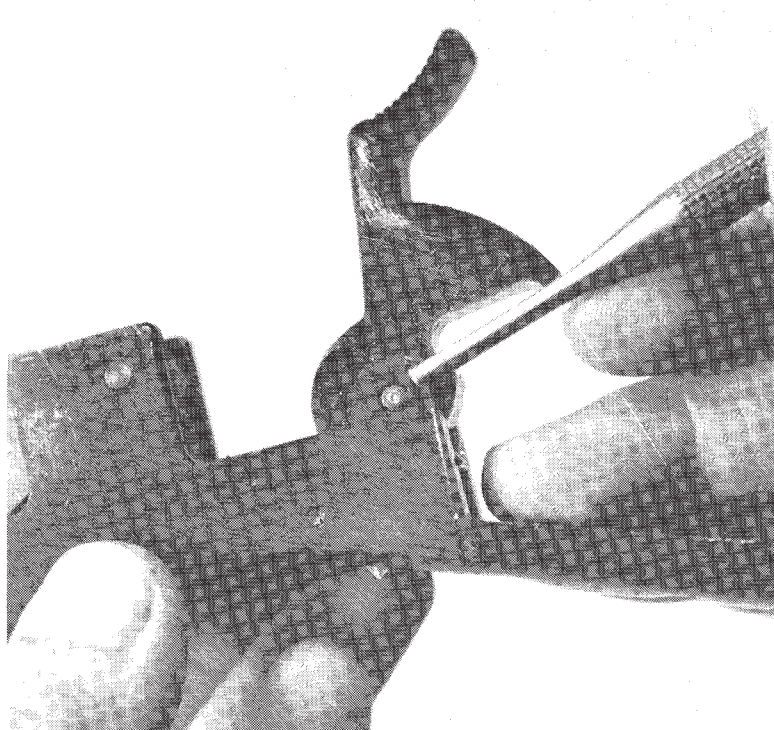
- 16.** Insert a tool to depress the bolt-locking block to its full upward position, and hold it there. Move the sub-frame toward the front and downward, and remove it from the receiver. Take care that the gate does not drag on the inside of the receiver as this is done. As the sub-frame is removed, the hammer strut (rebound lever) will drop out at the rear, so take care that it isn't lost.



- 17.** Remove the locking block and its spring from the bottom of the receiver.

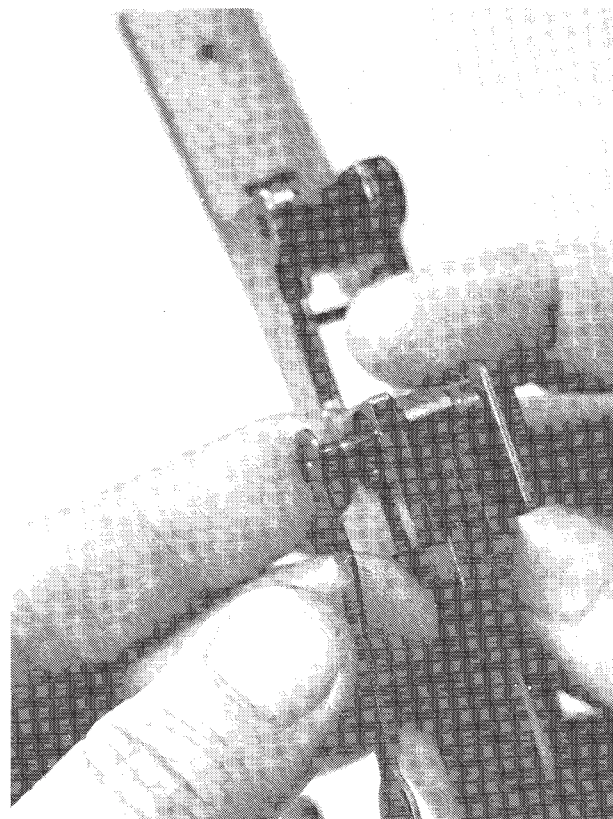


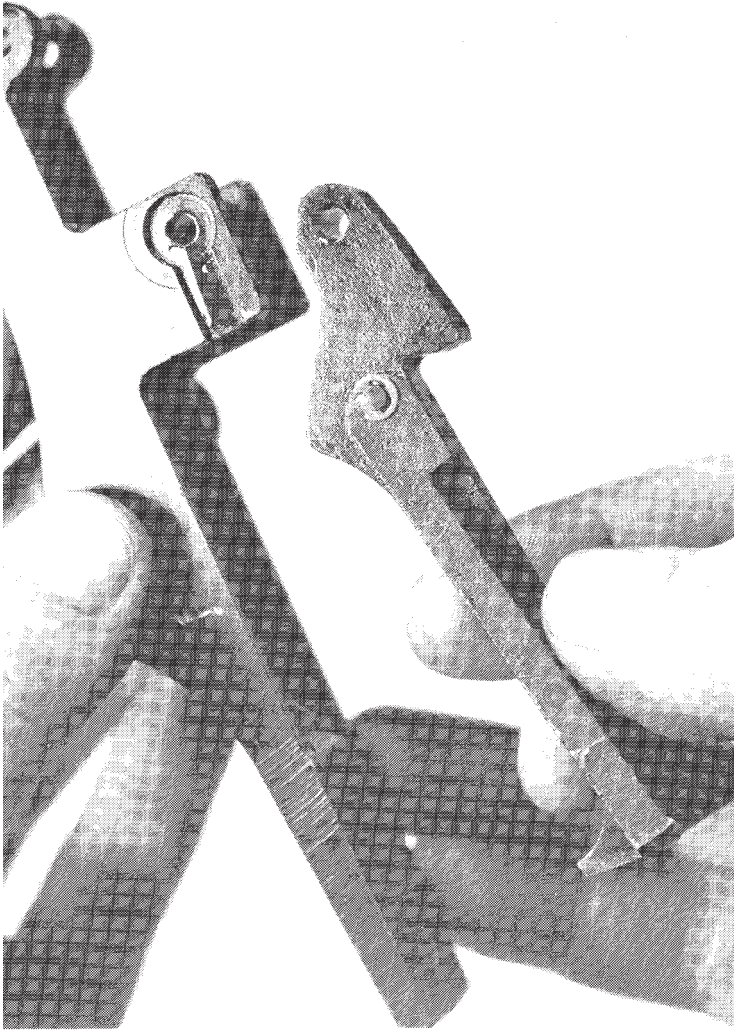
- 18.** Push out the hammer pivot, and remove the hammer upward.



- 19.** Removal of the hammer will allow the sear to pivot upward, relieving tension on its spring. Push out the sear cross pin, and remove the sear and its spring.

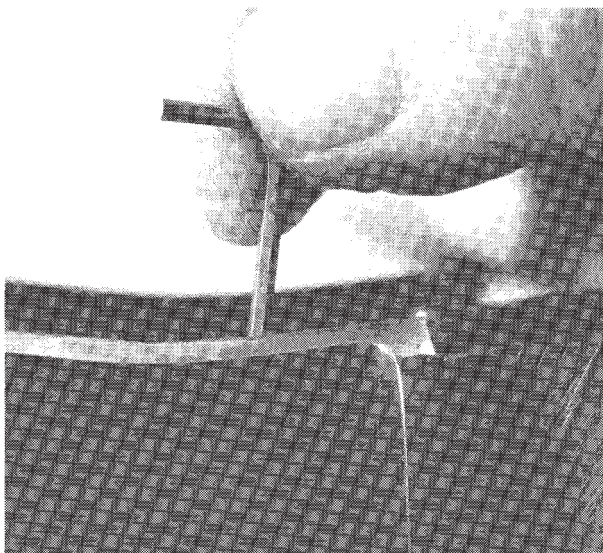
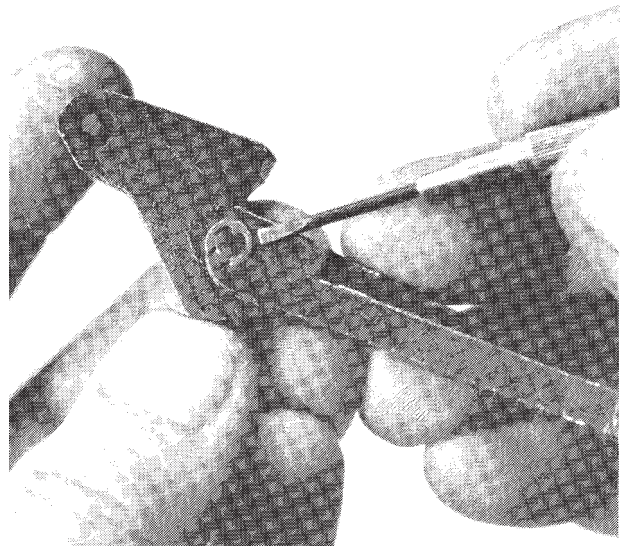
- 20.** Remove the loading gate toward the right. The loading gate mounting post is also the pivot for the carrier.



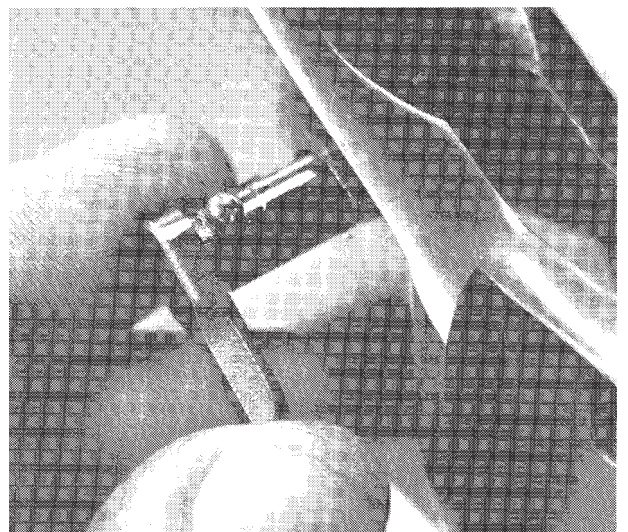


21. Remove the carrier upward.

22. Restrain the carrier plunger, and remove the C-clip on the right side of the carrier. Remove the plunger and spring toward the left.

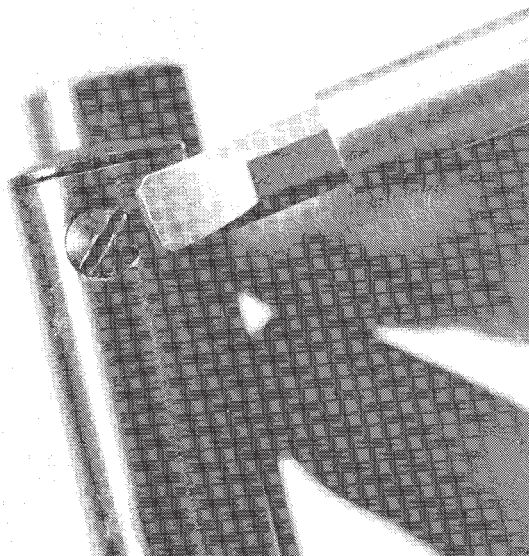


23. Use an Allen wrench to take out the safety retaining screw, located inside the receiver on the right side.

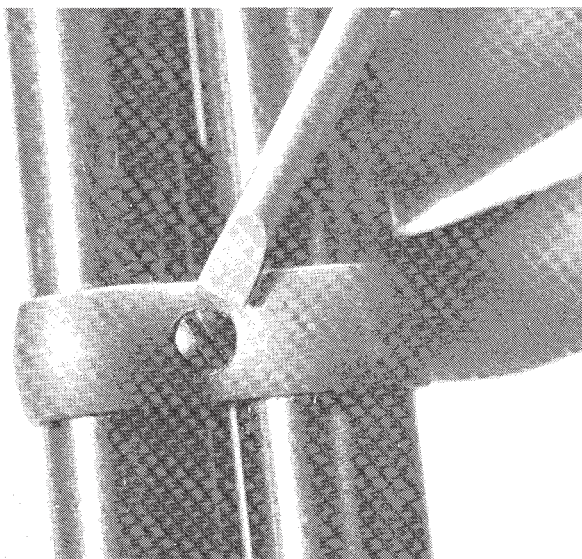
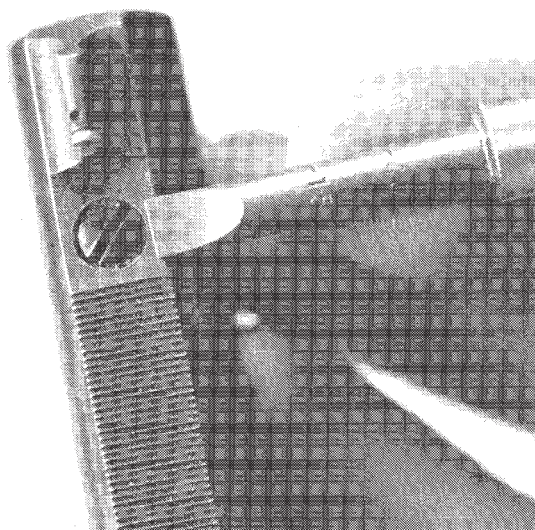


24. Remove the safety-lever toward the left. **Caution:** As the safety detent ball clears the left side of the receiver, its spring will force it out of its hole in the safety. Restrain the ball, and take care that it isn't lost.

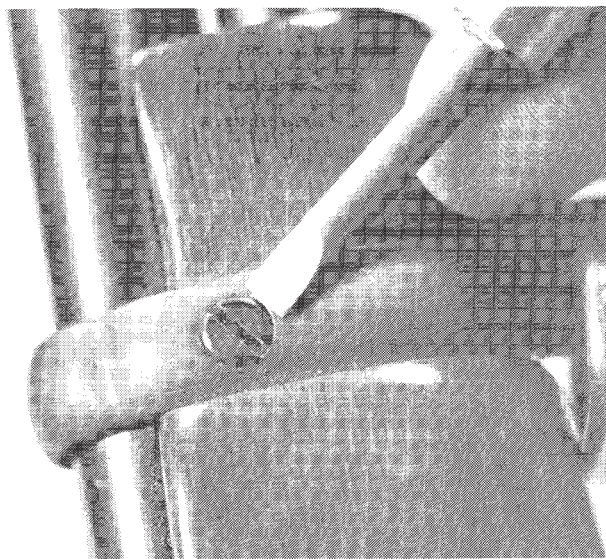
- 25.** Remove the vertical screw on the underside of the magazine tube at its forward end, restraining the end plug against the tension of the magazine spring. Take out the end plug, magazine spring, and follower.



- 26.** Remove the screw in the top of the front sight, and take off the sight upward.



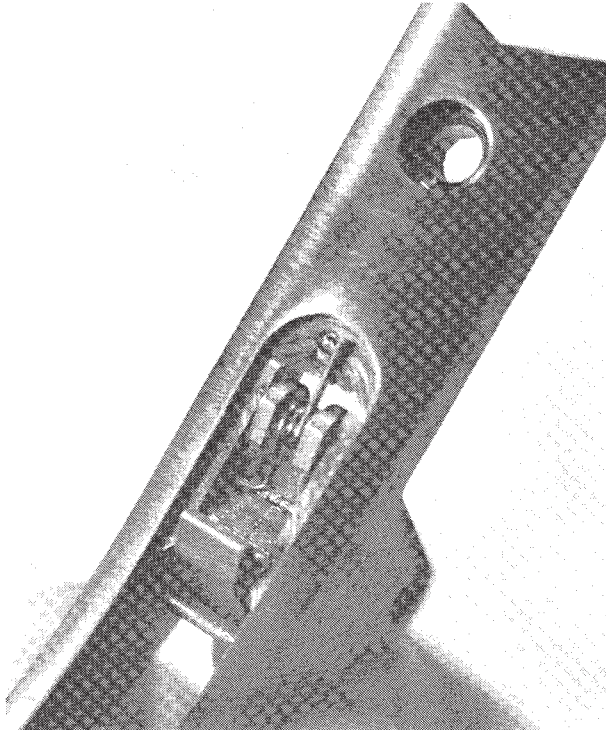
- 27.** Remove the cross screw in the front barrel band, and slide the barrel band off toward the front.



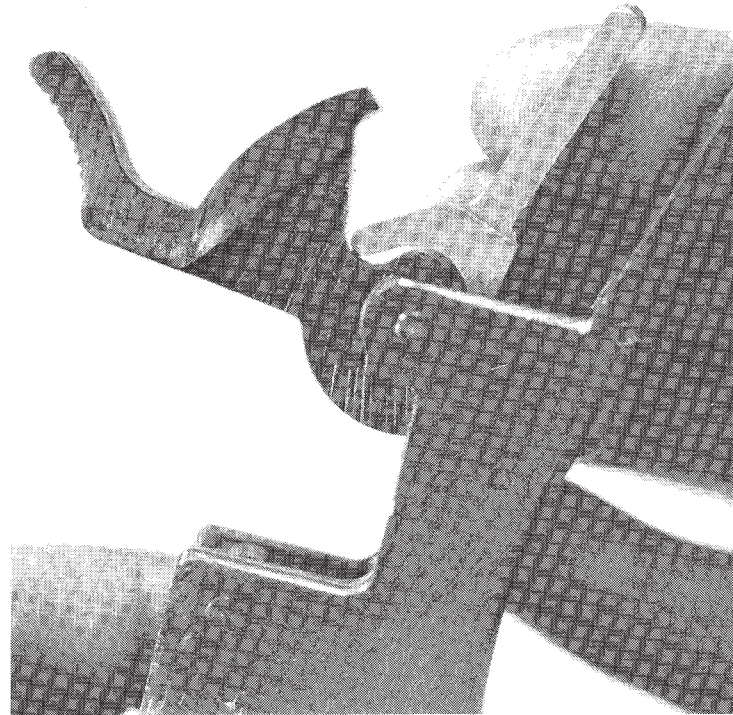
- 28.** Remove the cross screw in the rear barrel band, and slide the band off toward the front. The magazine tube can now be taken out toward the front, and the forend wood can be removed.

Reassembly Tips:

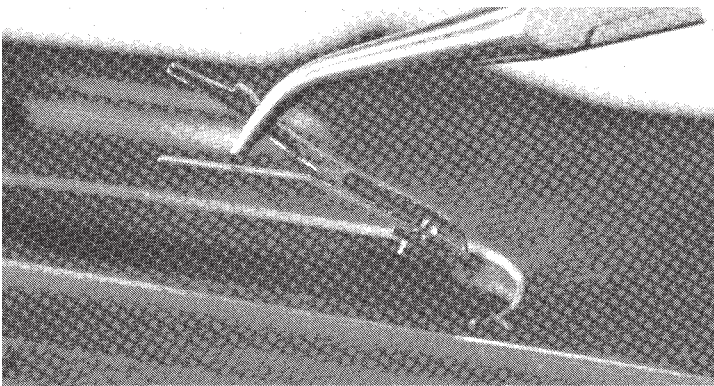
1. When replacing the sear and sear spring, note that the L-shaped end of the spring goes toward the front, as shown.



2. When replacing the sub-frame in the receiver, note that the hammer strut must be inserted before the sub-frame is moved into the receiver. Also note that the bolt-locking block must be depressed to its full top position and held there while the sub-frame is put in.



3. Grip the ejector with sharp-nosed pliers and guide its mounting stud into the hole in the left wall of the receiver. When it is in place, insert a fingertip to hold it there while the bolt is started in from the rear.





Navy Arms 1873 Springfield

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Navy Arms 1873 Springfield also apply to the following guns:

Original U.S. Military Model 1873 rifles and carbines, and other modern reproductions.

Data: Navy Arms 1873
Springfield Carbine

Origin: Italy

Importer: Navy Arms, Ridgefield,
New Jersey

Cartridge: 45-70 Govt.

Overall length: 39 inches

Barrel length: 22 inches

Weight: 10 pounds 6 ounces

The venerable 'trapdoor' Springfield is still popular with shooters, and the modern re-creations are very nearly the same as the originals. A few small differences will be noted in the takedown steps. The original 45-70 Model 1873 Springfield was the U.S. Military rifle from 1873 to 1892.

Disassembly:

1. Set the hammer in safety position (the first notch). Remove the two cross-screws on the left side. Keeping inward pressure as they are turned will push the lockplate outward on the right side. Note that on this gun the screws also retain a bar and saddle ring.



2. Remove the lockplate toward the right.



3. Depress the latch bar in front of the barrel band, and slide the band off toward the front. Note that if you have a full-length rifle there will be two bands and a cleaning rod to be removed.



4. Remove the large screw in the receiver tang, and take the barrel and receiver unit out of the stock.

- 5.** Removal of the lockplate screws will free the saddle bar and ring to be taken off, or, on other guns, the screw escutcheons.



- 6.** Remove the wood screws at the front and rear of the trigger plate, and remove the unit downward.



- 7.** If removal of the trigger is necessary, you must first take out the two vertical screws and remove the trigger guard.



- 8.** If the guard has been taken off (it is still in place here), drifting out this rollpin will allow removal of the trigger downward.

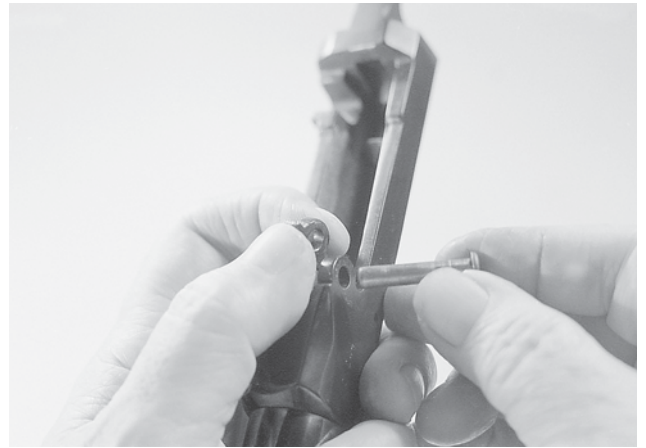
- 9.** If the metal parts need to be removed from the stock for refinishing, the buttplate is taken off by removing its two wood screws. The mounting post of the barrel band latch is accessible inside the stock, to allow it to be nudged outward for removal.



- 10.** Open the breechblock, and use a non-marring drift to push out the breechblock pivot pin. A suggestion: push it only part of the way out, so the ejector will be held in place. **CAUTION:** If you drift the pin all the way out, removal of the drift punch will release the ejector and its plunger and spring.

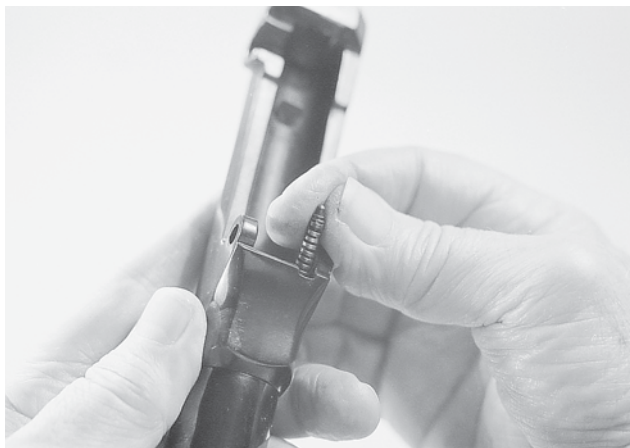


- 11.** If the breechblock pivot is stopped about 13/16 of an inch out, as shown, the ejector will be held in place and the breechblock can be removed. This is convenient if only the breechblock needs to be worked on.



- 12.** Restrain the ejector against its plunger and powerful spring, remove the pivot pin, and take out the ejector.

- 13.** Remove the ejector plunger and spring. A small hooked tool may be necessary to free these parts.



- 14.** The rear sight is retained on the barrel by screws at front and rear. The front sight on this carbine is not routinely removable.



- 15.** Remove the screw on the underside of the breech-block at the rear.



- 16.** Remove the firing pin toward the rear. Note, for reassembly, that the recess on the underside of the firing pin must be oriented to receive the tip of the retaining screw.

- 17.** On an original Military Model 1873, there is a small plate on the right side of the breechblock (old parts lists call it the “breechblock cap”), retained by a screw in the location indicated. Removal of the screw will allow the entire latch unit and its spring to be taken out. The latch lever is staked on the square tip of the latch shaft, and this unit should be taken apart only if repair is necessary.



- 18.** On this gun, and most of the later reproductions, the latch lug is retained on the cross-shaft by an Allen screw that is accessible via a hole in the lug.



- 19.** After the small screw is removed (or, just backed out even with the outer surface), the latch lever and shaft are taken off toward the right. Control the latch as the lever and shaft are removed.



- 20.** Remove the latch block.

21. Remove the latch block spring.



22. With the hammer in forward position, compress the hammer spring and disengage its hooks from the stirrup for removal. A large pair of pliers can be used for this, but if you have one, a mainspring vise, as shown, is better. This one came from Dixie Gun Works.



23. Loosen the sear spring screw, and nudge the spring flange out of its recess in the lockplate to relieve the tension. Then, remove the screw and the spring.



24. If only the sear needs to be removed, take out the rear bridle screw. If you are proceeding further, then take out both bridle screws.

25. If both screws have been removed, take off the bridle.



26. Remove the cap screw (tumbler screw) from the hammer.



27. Use a non-marring brass or aluminum drift to push the tumbler shaft out of the hammer.



28. Remove the tumbler and hammer from the lockplate.

- 29.** If necessary for repair, the spring stirrup can be removed by drifting out its crosspin. Note the orientation of the part for reassembly.



Reassembly Tips:



- 1.** When the tumbler shaft is put back into the hammer, be sure it is properly oriented, as shown. Lay the hammer on a wood surface and tap the tumbler with a nylon mallet to seat it before installing the cap screw.

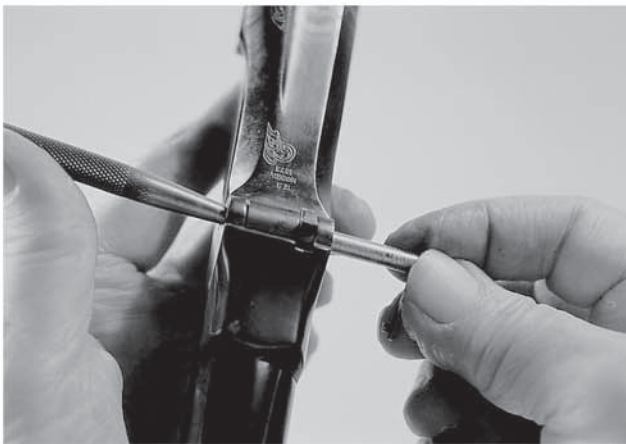


- 2.** When putting the assembled lockplate back into the stock, be sure the hammer is set on the safety notch, as shown. As the unit is put in, push the trigger forward to clear the sear.

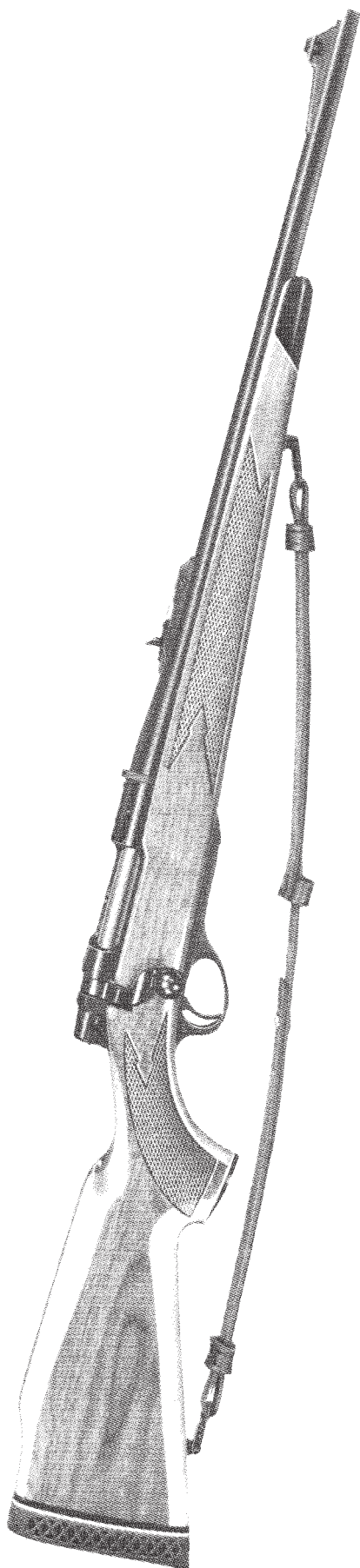
- 3.** Be sure the cross-shaft of the breechblock latch is oriented so the small Allen screw will enter its recess in the shaft, and tighten the screw securely. A drop of Loc-Tite might be a good idea, or another 5-44 lock screw could be put in to secure the original.



- 4.** If the ejector spring is not too stiff, a tool can be used from the other side, as shown, to lever it into position for insertion of the pin.



- 5.** If the spring tension is very heavy, another way to hold the ejector in position is to put the breechblock in place. You will still have to insert a tool for final positioning of the ejector.



Remington Model 600

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Remington Model 600 also apply to the following guns:

Remington Mohawk 600

Remington Model 660

Data: Remington Model 600

Origin: United States

Manufacturer: Remington Arms Company
Bridgeport, Connecticut

Cartridges: 222, 223, 243,
6mm Remington, 308,
35 Remington,
6.5mm Remington Magnum
and 350 Remington
Magnum

Magazine capacity: 4, 5, or 6 rounds
depending on caliber

Overall length: 37-1/4 inches

Barrel length: 18-1/2 inches

Weight: 5-1/2 pounds

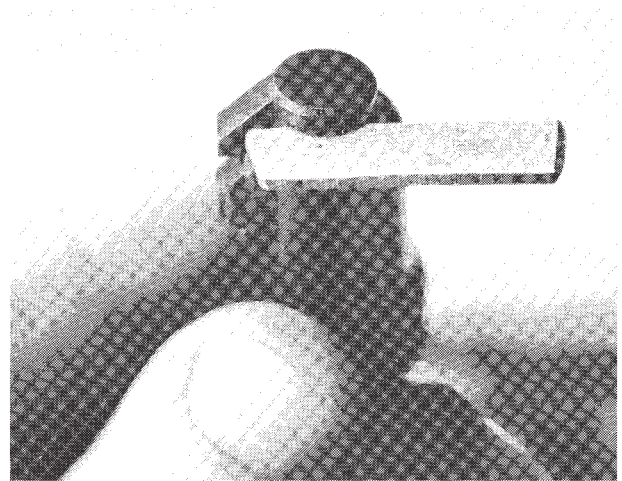
This handy little carbine, and its counterpart the Model 660, did not stay long on the scene. The Model 600, with its distinctive ventilated barrel rib, was made from 1964 to 1967. The successor, the Model 660, was made from 1968 to 1971. During this time, a version called the “Mohawk 600” was produced, a gun very similar to the Model 660, but without the barrel rib. Mechanically, these three are virtually identical, and the same instructions will apply.

Disassembly:

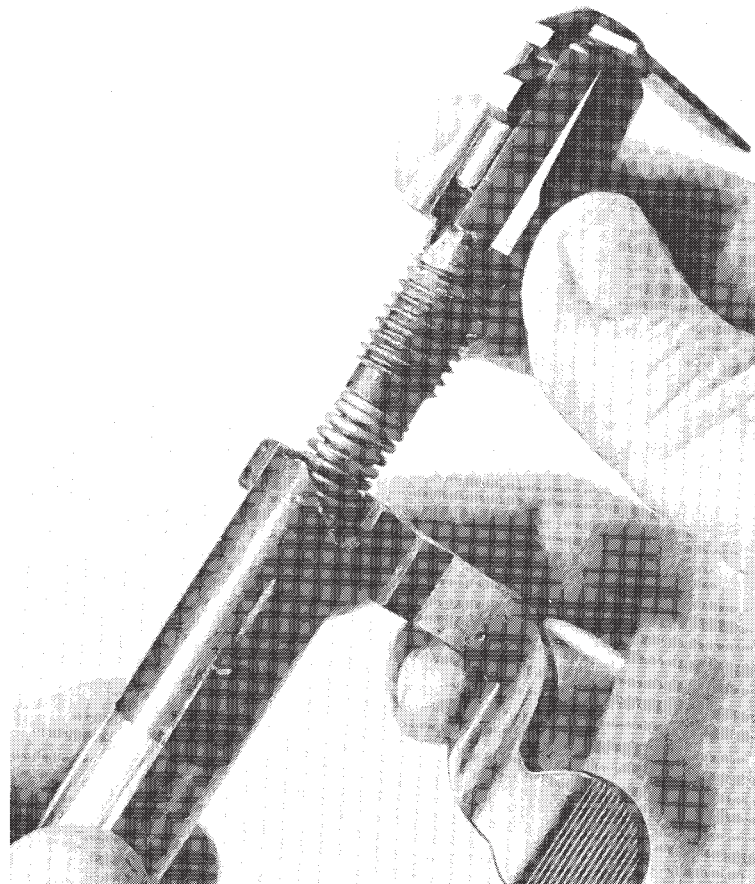
1. Open the bolt and move it partway to the rear. Use a small tool to depress the bolt stop, located at the left rear of the receiver on the inside, next to the bolt. Hold the stop down, and remove the bolt toward the rear. As the bolt emerges from the receiver, it must be lifted to clear its right lug over the safety.



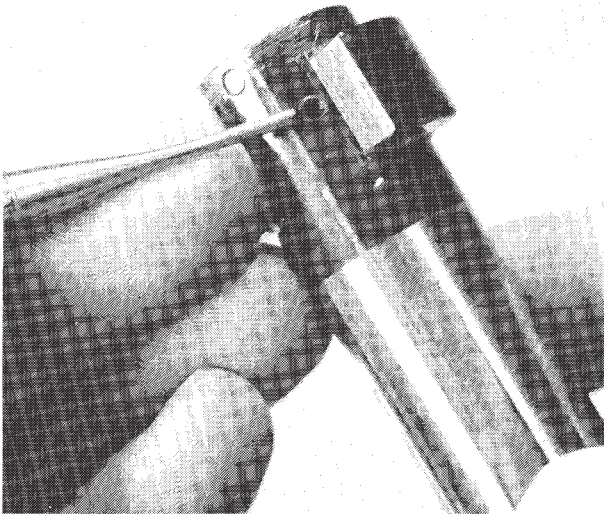
2. Grip the underlug of the cocking piece firmly in a vise and pull the bolt forward until a gap appears between the front of the cocking piece and the rear of the bolt end piece. Insert a thin piece of steel plate between the cocking piece and the bolt end piece. Note that on some models, such as the one shown, a slot is provided on the side of the cocking piece for the insertion of the plate. Release the spring tension, and the plate will trap the striker at the rear.



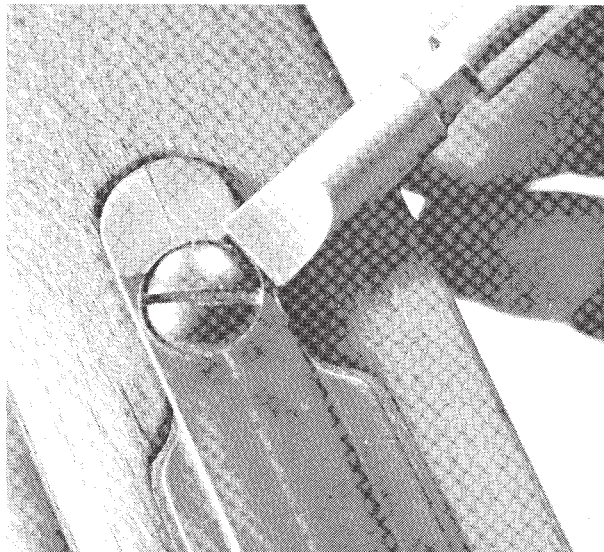
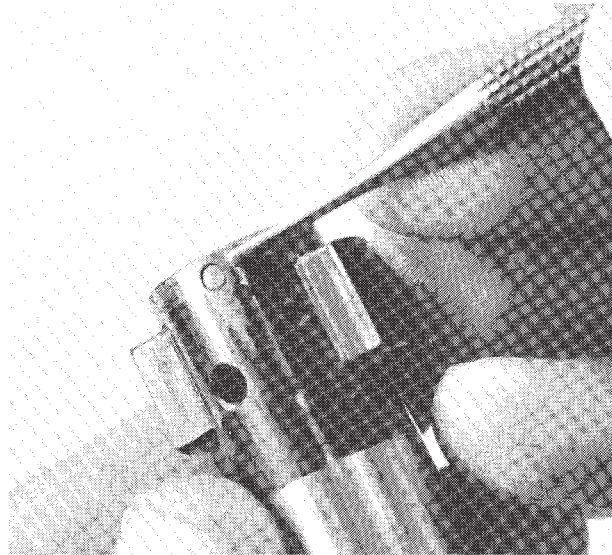
3. Taking care not to dislodge the plate, unscrew the bolt end piece from the rear of the bolt. The factory advises against further disassembly of the striker system, since reassembly can be difficult without special tools. I will note here that the cocking piece is retained on the rear of the striker shaft by a cross pin.



- 4.** The ejector is retained in the front of the bolt by a cross pin. Restrain the ejector when drifting out the pin, and remove the ejector and spring toward the front.

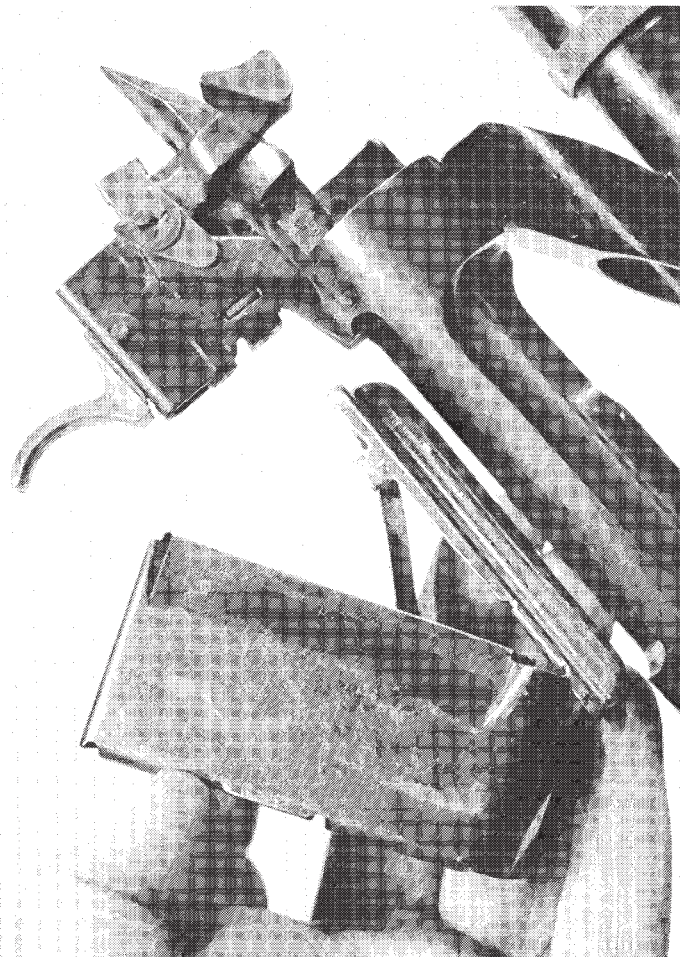


- 5.** The extractor is retained inside the bolt face recess by a small rivet, and if unbroken, it should not be removed. If removal is necessary, the rivet is driven inward. The ejector must first be removed.

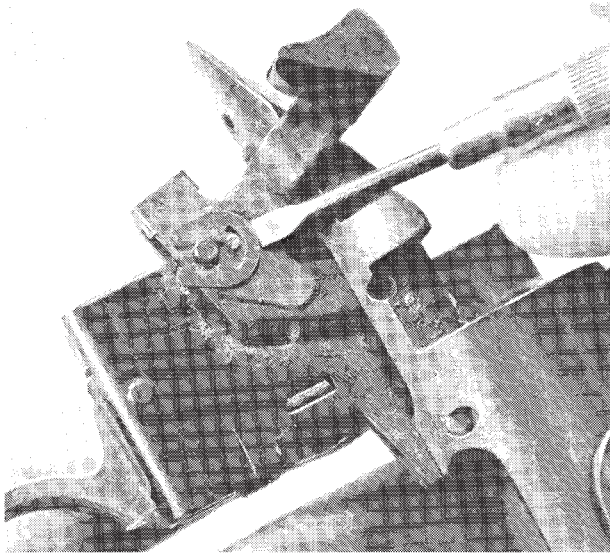


- 6.** Remove the large screw on the underside at the front of the trigger guard/magazine housing. Remove the screw on the underside at the rear of the trigger guard, and separate the action from the stock. The trigger guard unit can be taken off downward.

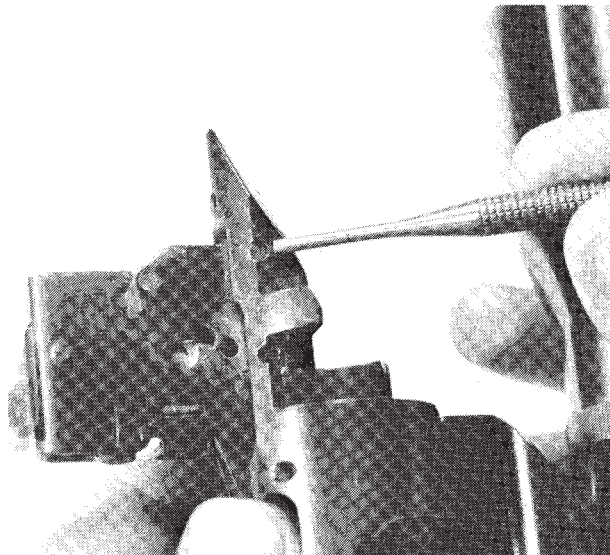
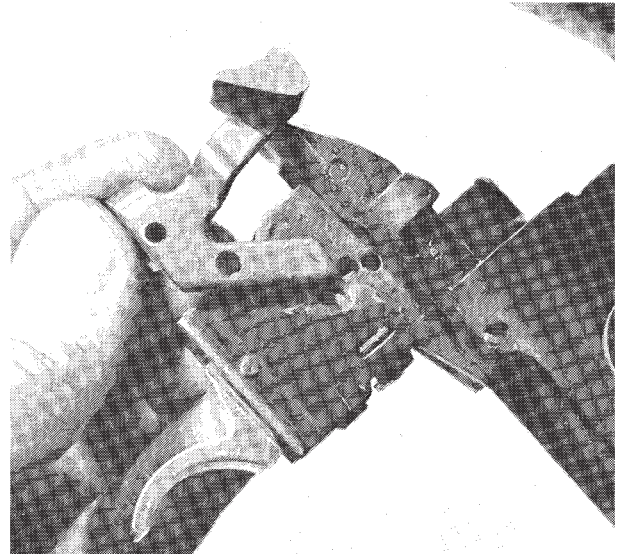
- 7.** The magazine box is easily detached from the underside of the receiver, and the spring and follower can be taken out of the box.



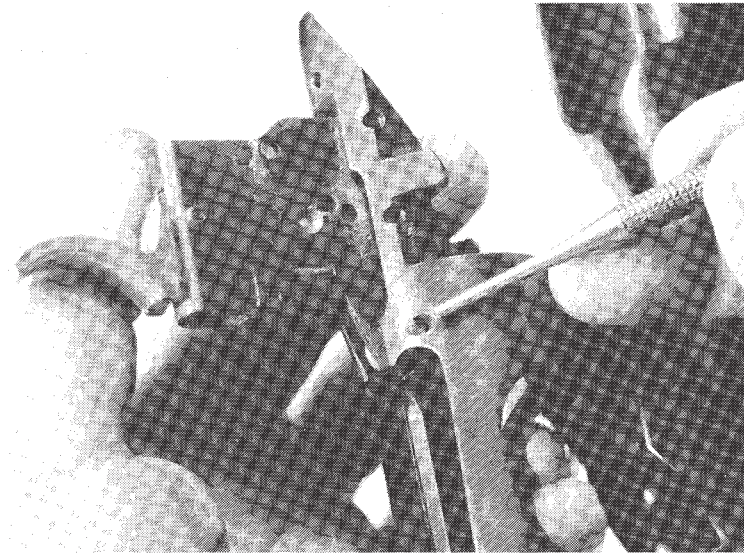
- 8.** Position the safety snap washer so its opening is aligned with the stud on the detent spring, and push off the snap washer upward. Take off the detent spring, and take care not to lose the small steel ball in the side of the safety-lever beneath the spring.



- 9.** Push out the safety pivot toward the left, and remove the safety toward the rear and downward.

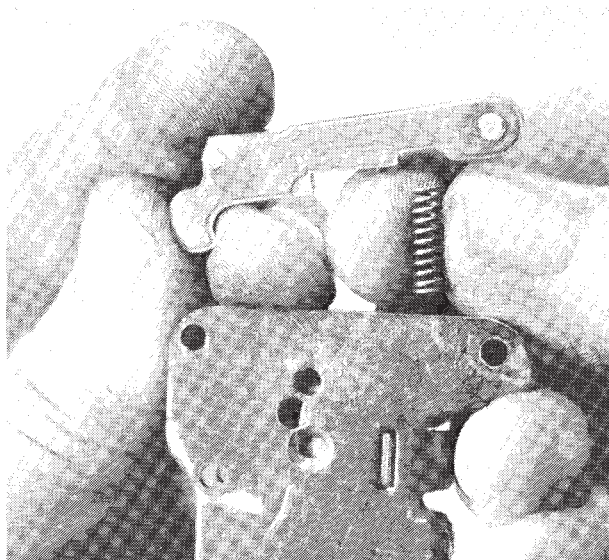


- 10.** Drift out the rear trigger housing cross pin toward the left, while restraining the sear at the top. When the pin is out, the sear spring will push the sear upward.

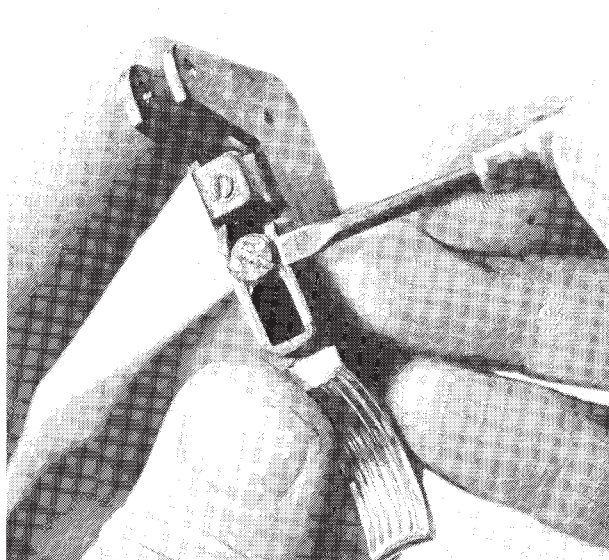


- 11.** Drift out the front trigger housing cross pin, and remove the trigger housing downward.

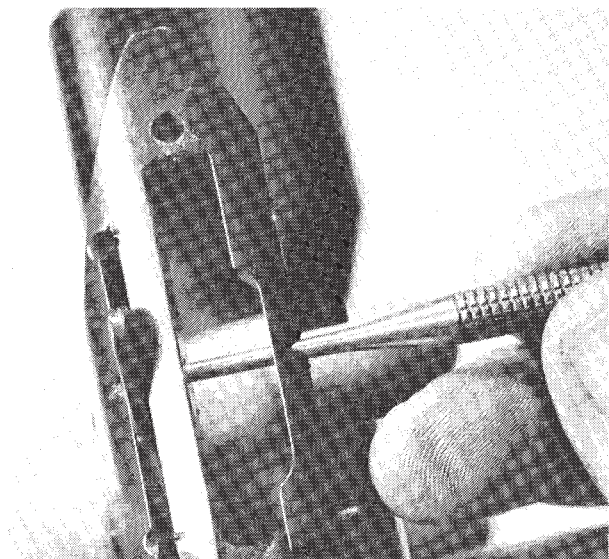
- 12.** Remove the sear and sear spring from the top of the trigger housing.



- 13.** The trigger housing should not be disassembled beyond this point in normal takedown. There are three trigger adjustment screws, two at the front and one at the rear, which are set and sealed with lacquer at the factory, and these should not be disturbed. A cross pin retains the trigger and its connector, but removal requires that the two front screws be backed out.

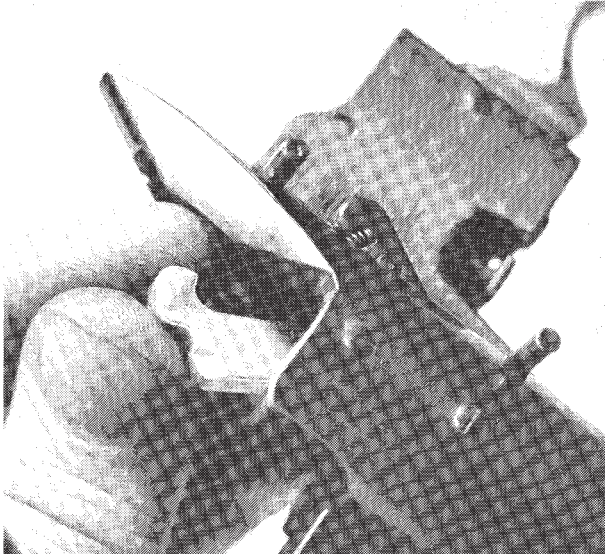


- 14.** Removal of the bolt stop requires that its short pin be drifted out toward the left, and there is an access hole on the right side of the receiver through which a drift punch can be inserted to drive out the pin. The bolt stop and its spring are removed downward.

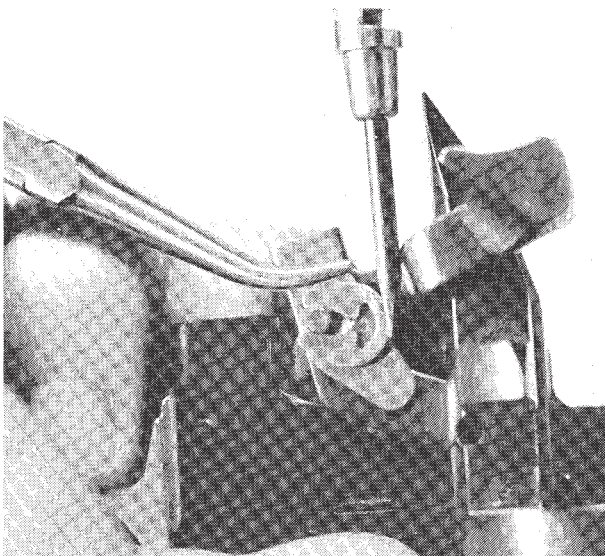
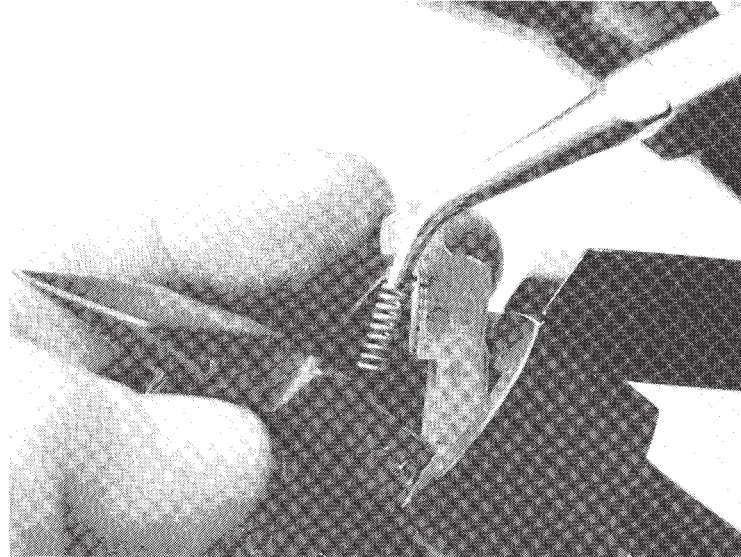


Reassembly Tips:

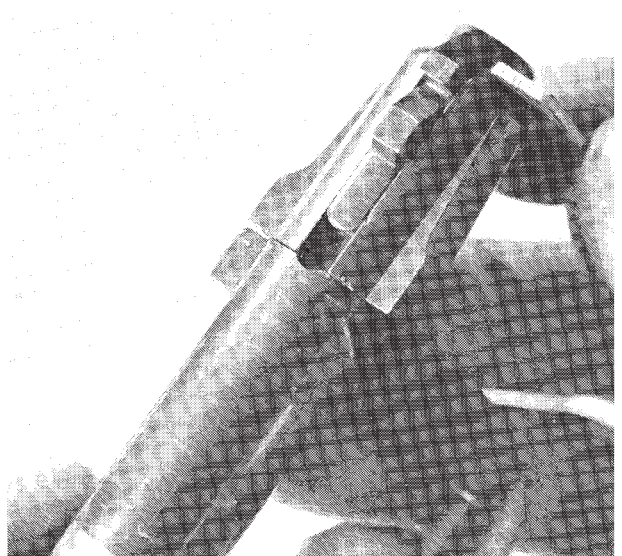
1. When replacing the trigger housing, start the two cross pins in from the left, and be certain that the holes in the housing are aligned with the pins, to avoid deforming the housing. When the pins are just into the housing, but not into the center space, insert the sear from the rear, align its hole with the front cross pin, and drive the pin across. Be sure that left tip of the cross pin is clear of the bolt stop slot.



2. Insert the sear spring, being sure it is properly positioned to engage its recess on the underside of the sear, and swing the sear downward, keeping it depressed while the rear cross pin is driven across.



3. When replacing the safety system, be sure the pivot post is all the way through to the right when installing the detent spring and snap washer. Use pliers to compress the detent spring, and be sure the inside surfaces of the washer engage the groove in the top of the pivot post.



4. When removing the steel plate holding the striker, position the bolt end piece as shown, so the released striker cocking piece will be in cocked position, and the bolt will be ready for reinsertion in the receiver.



Remington Model 700

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Remington Model 700 also apply to the following guns:

Remington Model 78 Sportsman Remington Model 700 BDL Custom Deluxe
Remington Model 700 AS, FS Remington Model 700 BDL Varmint Special
Remington Model 700 ADL Remington Model 700 Classic
Remington Model 700 C Grade
Remington Model 700 Mountain Rifle, Custom KS
Remington Model 700 Safari Grade, Custom KS
Remington Model Seven, Custom KS
Remington Model Seven FS

Data:	Remington Model 700
Origin:	United States
Manufacturer:	Remington Arms Company Bridgeport, Connecticut
Cartridges:	Most popular calibers from 222 to 458
Magazine capacity:	4 rounds (3 in magnum calibers)
Overall length:	41-1/2 to 44-1/2 inches
Barrel length:	22 or 24 inches
Weight:	7 to 7-1/2 pounds

When Remington discontinued the Model 721, 722, and 725 rifles in 1962, the successor was the excellent Model 700. Although the basic mechanical features were essentially the same, there were a number of small mechanical improvements. Since its introduction, the Model 700 has been offered in several sub-models, each having various special features. From a takedown viewpoint, the only notable difference would be the version with a blind magazine, lacking a separate magazine floorplate. Otherwise, the same instructions will apply.

Disassembly:

1. Open the bolt, and push upward on the bolt release, located inside the trigger guard, just forward of the trigger. Remove the bolt toward the rear.



2. Grip the underlug of the cocking piece firmly in a vise, and pull the bolt body toward the front to clear the front projection of the cocking piece from the rear of the bolt. Unscrew the bolt from the sleeve and striker assembly counter-clockwise (front view).



3. Grip the front portion of the striker firmly in a vise, taking care to exert no side pressure, and push the sleeve forward until a small piece of steel (at least 1/16 inch thickness) can be inserted between the front of the cocking piece and the rear of the sleeve. Grip the cocking piece in a vise, hold firmly to the striker and spring, and drift out the cross pin in the cocking piece. **Caution:** The striker spring is fully compressed and is quite strong, so keep it under control. When the pin is out, slowly release the spring tension and remove the striker, spring, and bolt sleeve toward the front.

4. Drifting out the cross pin at the front of the bolt will release the ejector and its spring for removal toward the front. **Caution:** *The ejector spring is partially compressed, even when at rest. Control it, and ease it out.*

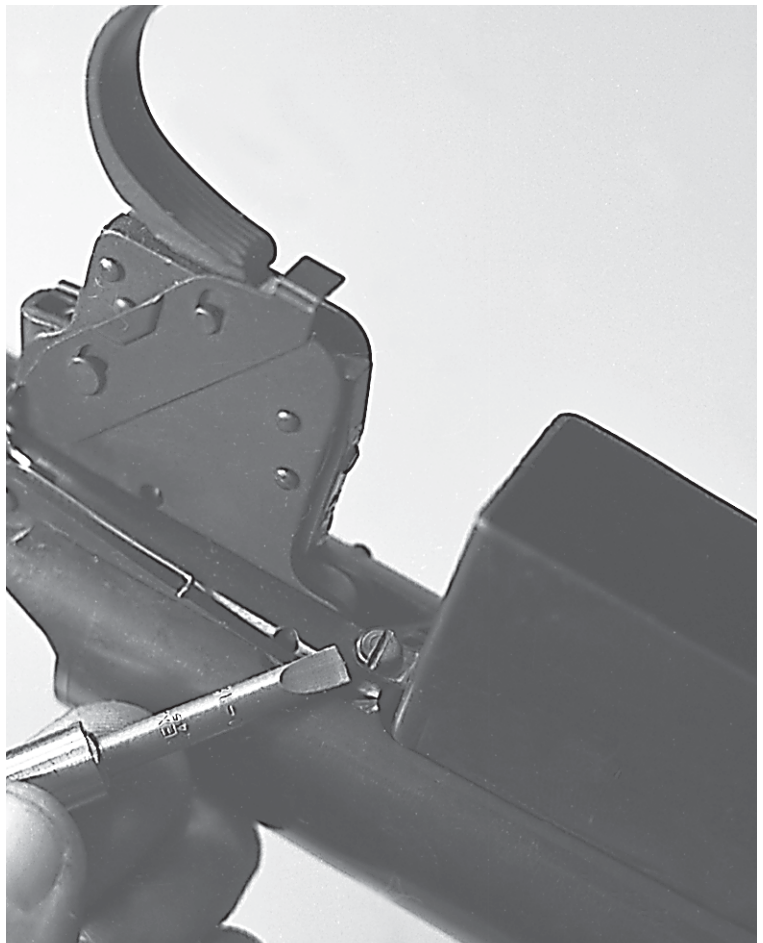


5. The extractor is retained inside the cartridge head recess in the front face of the bolt by a tiny rivet, and removal in normal disassembly is definitely not recommended, as this will usually break the extractor. If removal is necessary to replace a broken extractor, use a small-diameter drift punch to drive the rivet inward. Note that the ejector must be removed before this is done.



6. Remove the large vertical screw at the rear of the trigger guard. Remove the large vertical screw on the underside of the stock, forward of the trigger guard. Remove the vertical screw at the front of the trigger guard, and take the action out of the stock upward. The trigger guard can be taken off downward.

7. The magazine spring and follower will be released for removal as the action is taken out of the stock. The magazine box is retained by a small vertical screw through a tab at the rear, on the right underside of the receiver.



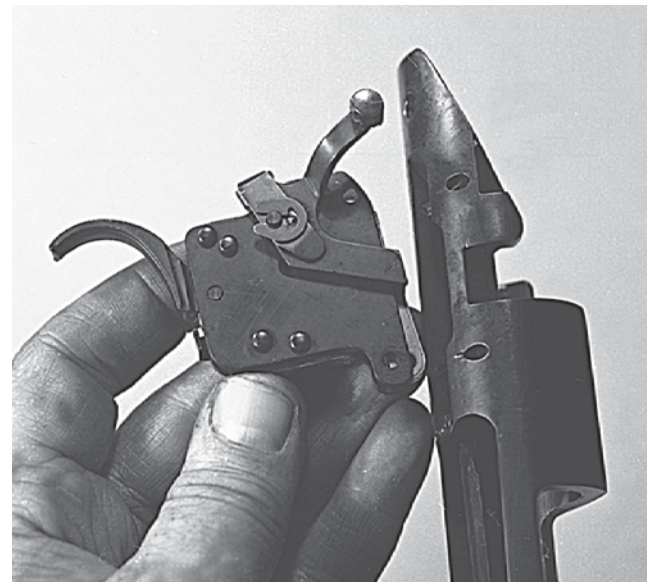
- 8.** Drift out the front trigger housing cross pin toward the right.



- 9.** Note that the rear trigger housing cross pin is also the retainer and pivot for the bolt stop and its spring, and the spring should be restrained while the pin is drifted out.



- 10.** Set the safety-lever in the on-safe position, and drift out the rear trigger housing cross pin. Remember that the bolt stop and its spring will be released as the pin clears their position.

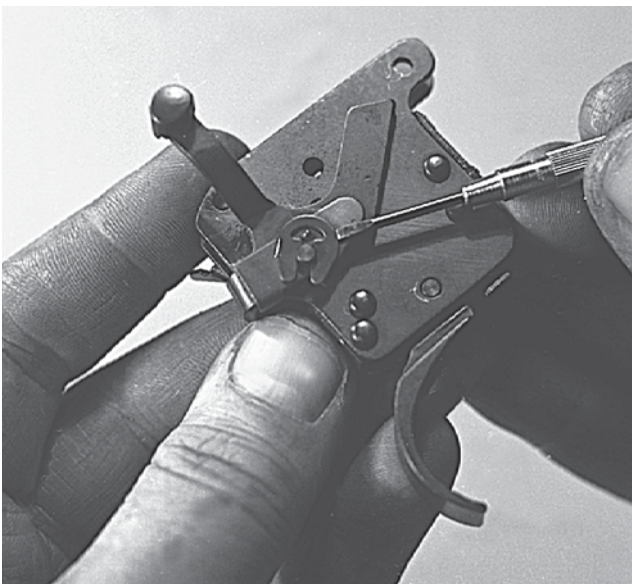
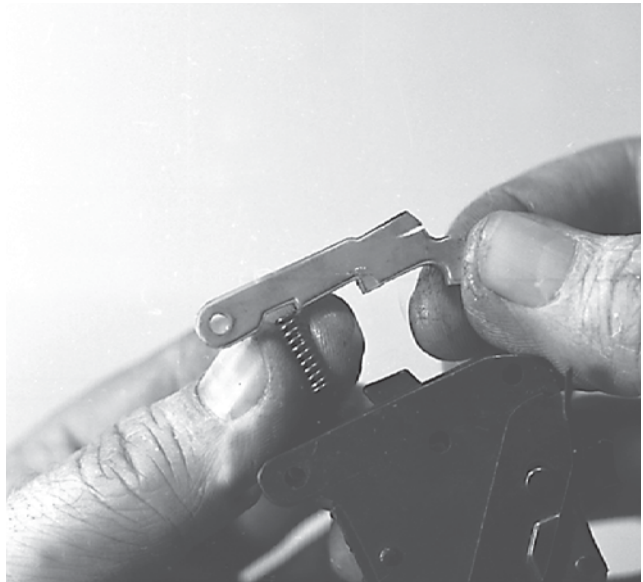


- 11.** Remove the trigger assembly downward.

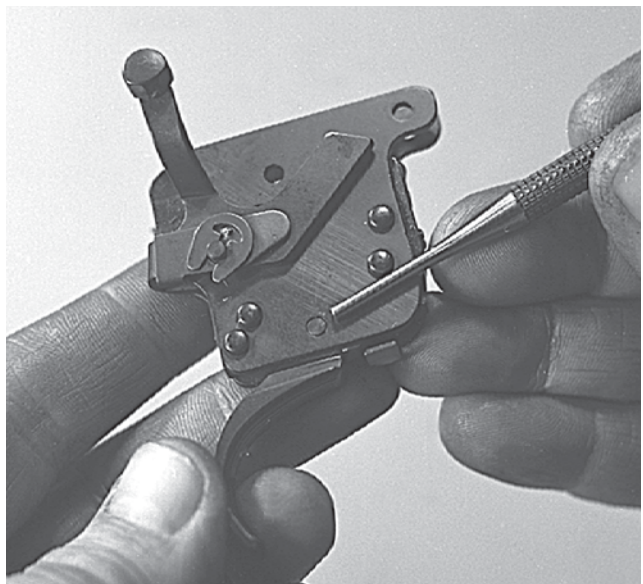
- 12.** Remove the bolt stop and its spring.



- 13.** Remove the sear and its spring from the top of the trigger housing.



- 14.** Remove the C-clip from the end of the safety pivot post on the right side of the housing, and take out the pivot post toward the left. The safety detent spring can then be pivoted downward and removed. Take care not to lose the small detent ball, which will be released as the spring is removed. The safety can now be moved out toward the rear. Removal of the pivot post will also free the bolt stop release from the left side of the housing.



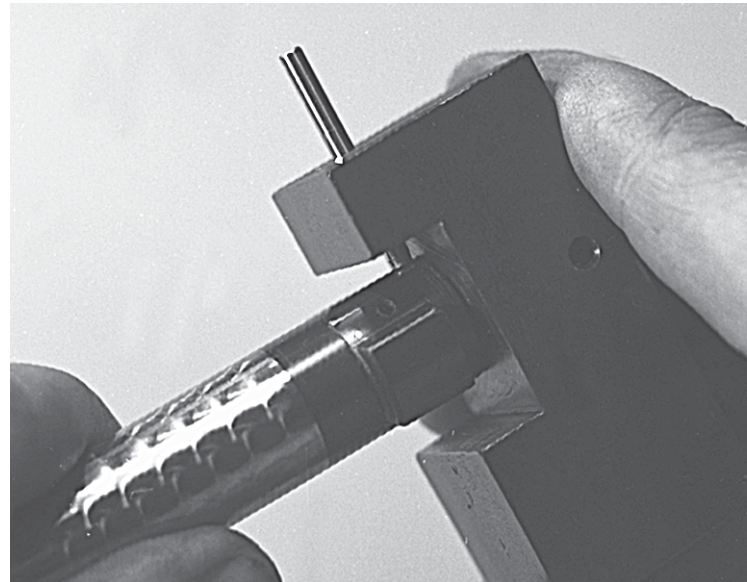
- 15.** Drifting out the trigger cross pin will release the trigger and trigger connector for removal. The other four cross pins hold the housing together, and are riveted in place. Removal of these pins is not recommended.

Reassembly Tips:

1. Before the bolt can be replaced in the receiver, the striker must be in the cocked position, as shown.



2. If a broken extractor is being replaced, a new extractor rivet should be used. Clinching the new rivet is difficult, as its inner head must be well supported while the outer tip is peened and spread. With a tool form B-Square, shown in the photo, the job is much less difficult.





Remington Model 742

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the Remington Model 742 also apply to the following guns:

Remington Model 74 Sportsman	Remington Model 740
Remington Model 742 BDL	Remington Model 742 Carbine
Remington Model 750	Remington Model 7400
Remington Model 7400 Carbine	Remington Model Four

Data: Remington Model 742

Origin: United States

Manufacturer: Remington Arms Company,
Bridgeport, Connecticut

Cartridges: 6mm Remington,
243 Winchester,
280 Winchester,
308 Winchester,
30-06 Springfield

Magazine Capacity: 4 rounds

Overall length: 42 inches

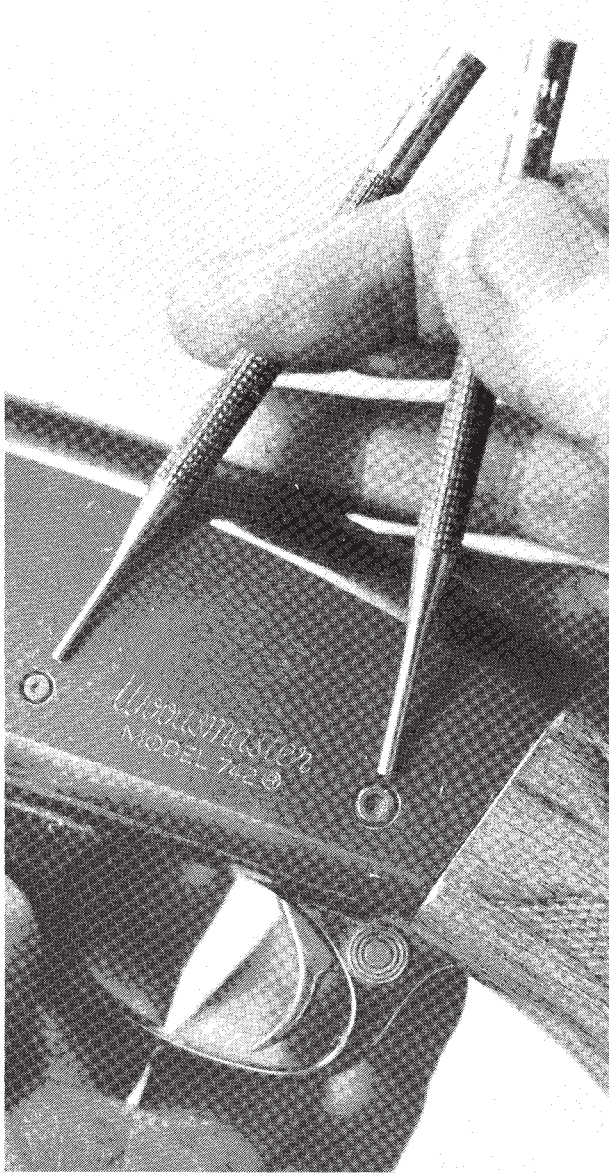
Barrel length: 22 inches

Weight: 7-1/2 pounds

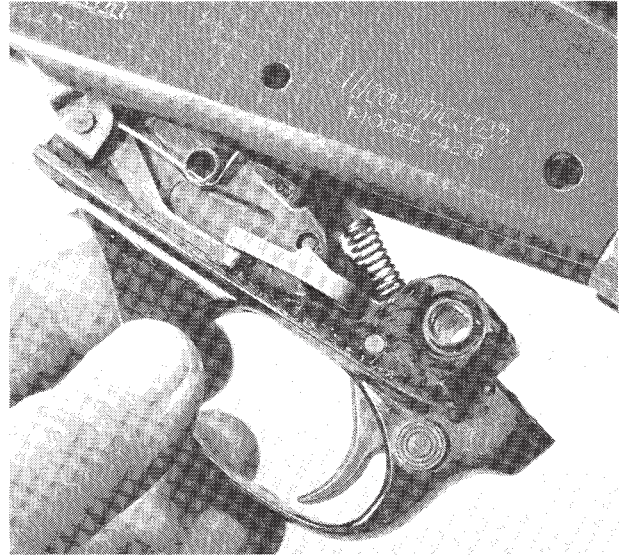
The original version of this gun, the Model 740, was first offered in 1955, and was made for only 5 years. It was redesigned in 1960 to become the Model 742. A carbine version was also available, with an 18-1/2-inch barrel. In 1982, a slight redesign created the Model 7400 and the Model Four. In 1985, a no-frills version was called the Model 74 Sportsman. The last two named were discontinued in 1987. In the later models, the extractor is not riveted to the bolt. Otherwise, the instructions will apply.

Disassembly:

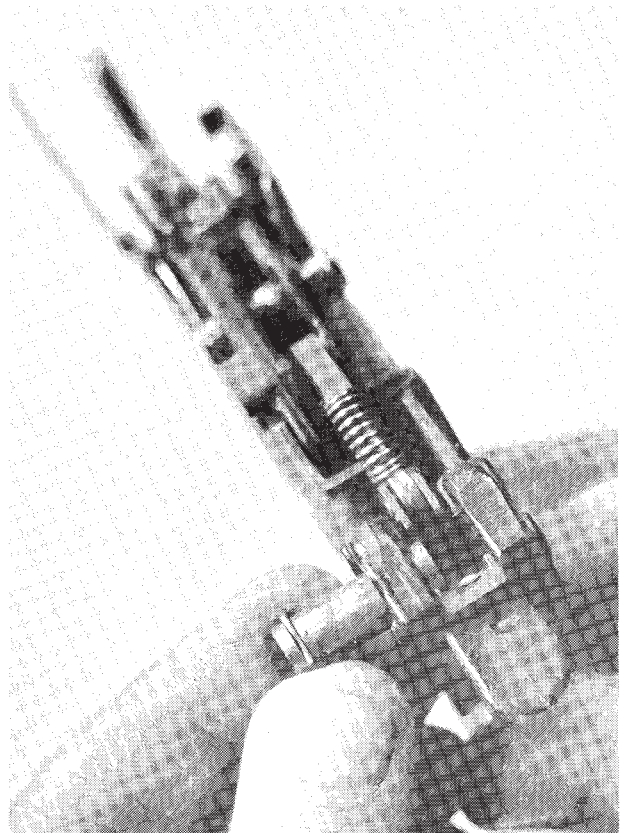
1. Remove the magazine, and cycle the action to cock the internal hammer. Push the safety across to the on-safe position. Use a drift punch to push out the two cross pins in the receiver.



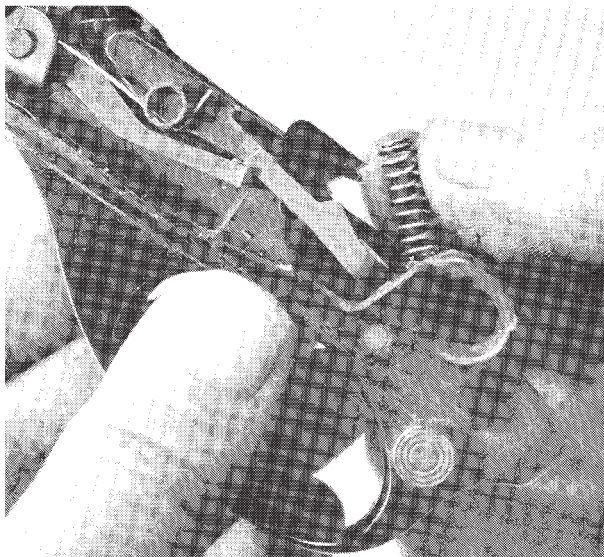
2. Move the trigger group forward, then take it off downward.



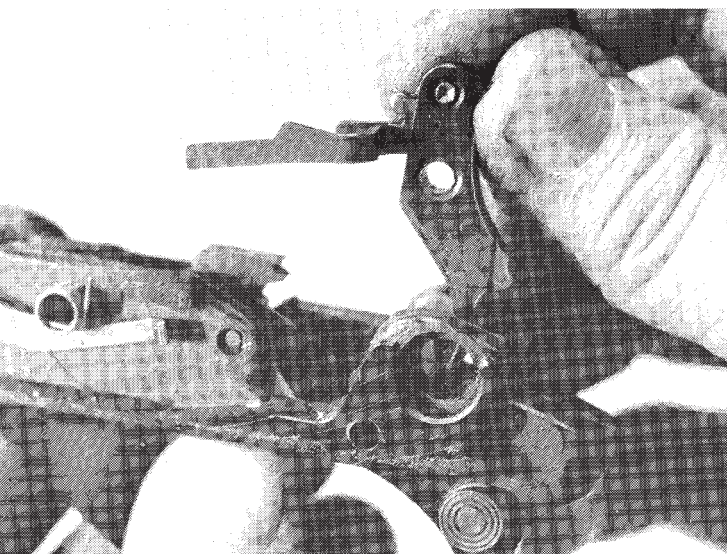
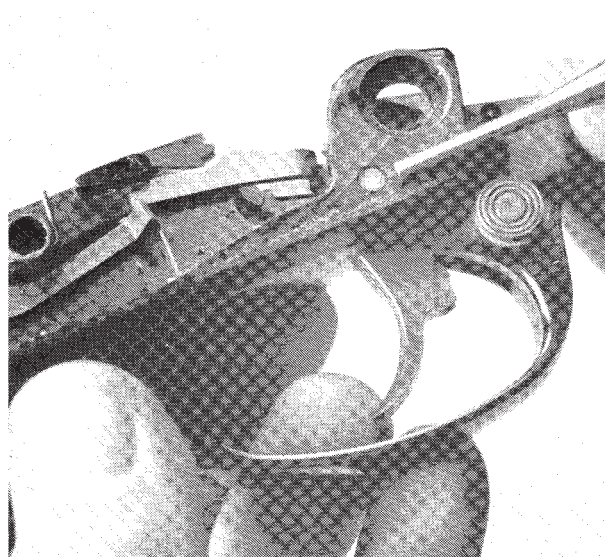
3. Push the safety to the off-safe position. Restrain the hammer, pull the trigger to release it, and ease it forward. Keeping the trigger pulled to the rear, push out the rear cross pin sleeve toward the left.



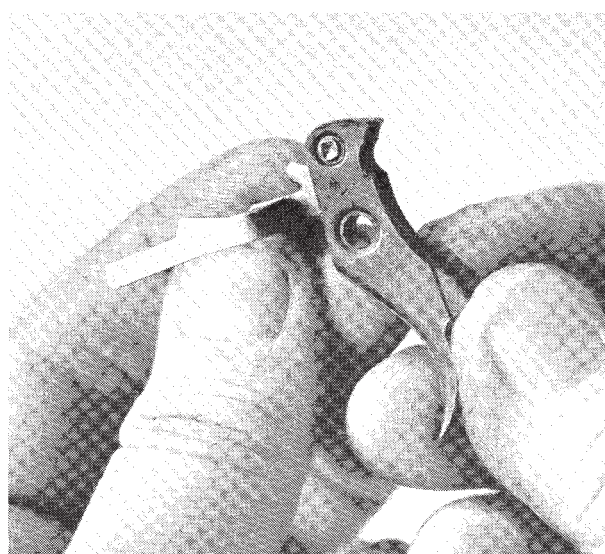
- 4.** Removal of the pin sleeve will allow the top of the trigger to move further toward the rear, easing the tension of the combination sear and trigger spring. This spring can now be flexed off its stud on the rear of the sear, and removed upward.



- 5.** Drift out the trigger cross pin toward right.

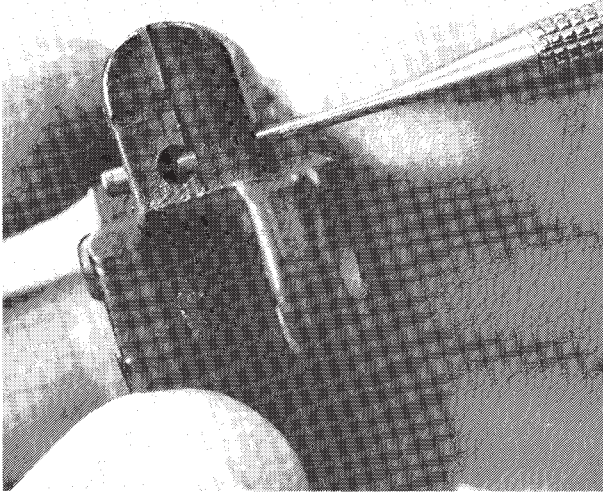


- 6.** Remove the trigger assembly upward, turning it slightly to allow its left connector arm to clear the shelf on the trigger housing.

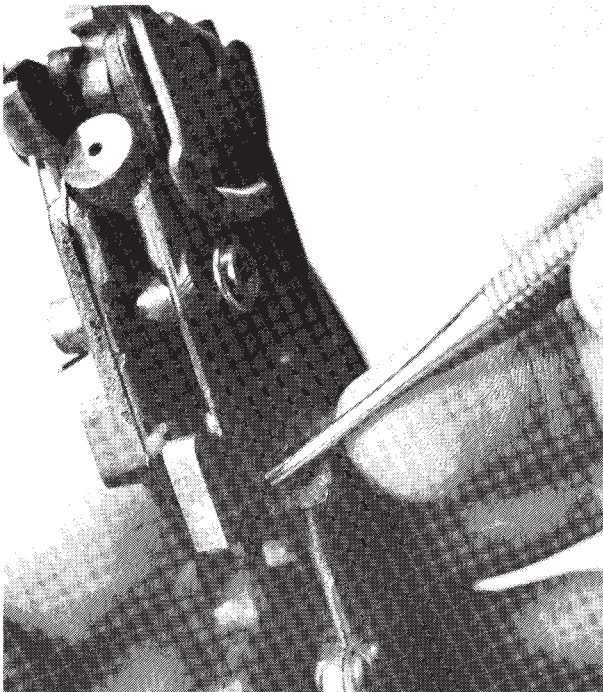
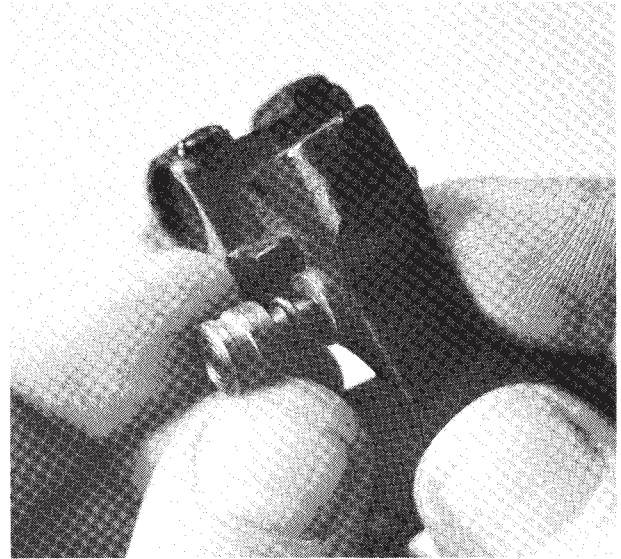


- 7.** If necessary for repair, the right and left connector arms can be detached from the trigger by drifting out the cross pin. However, its left tip is semi-riveted on the left side, and in normal disassembly it is best left in place. If removal is necessary, the pin must be drifted out toward the right, and take care that the parts are well supported, to avoid deforming the top wings of the trigger.

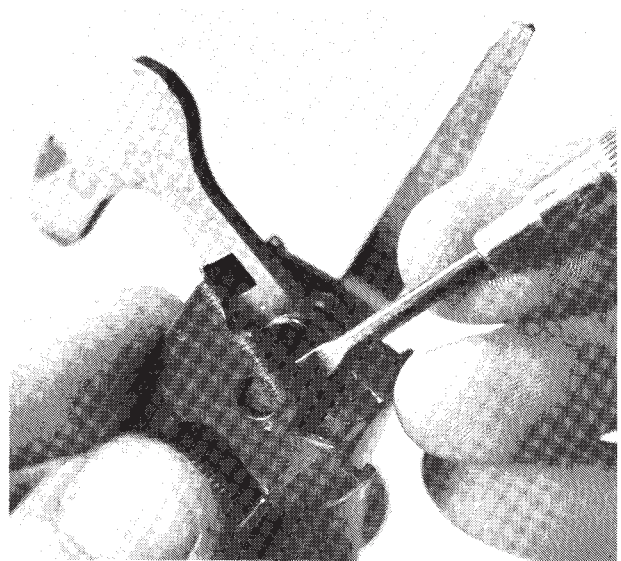
- 8.** Push out the small cross pin at the upper rear of the trigger housing toward the right, holding a fingertip over the hole on top to restrain the released safety spring.



- 9.** Remove the safety spring from its hole in the top, and if possible, the detent ball beneath it. If the ball can't be shaken out at this time, it can be removed after the safety is taken out. Push out the safety toward either side, and if the detent ball has not been previously removed, insert a small drift into the hole at the top, and push the ball downward, into the safety tunnel. Take care to catch it as it rolls out.

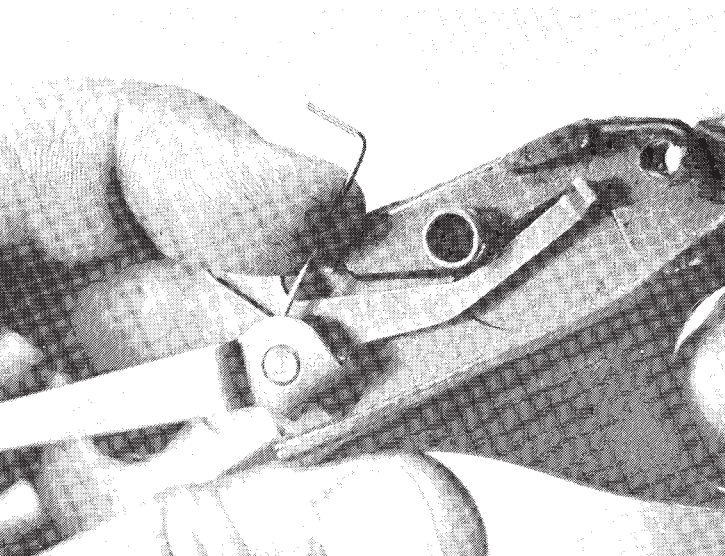


- 10.** The sear pivot pin is accessible on the right side of the trigger housing by angling a small drift punch as shown. After it is started out, it can be removed toward the left. The sear is then taken out upward.

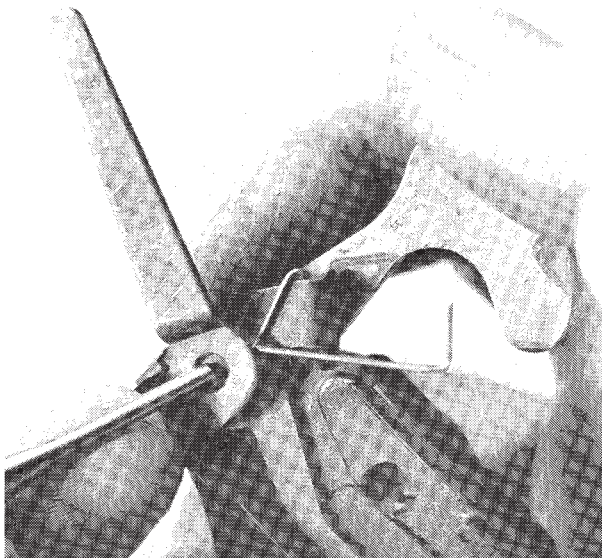


- 11.** The magazine catch is moved off its post on the trigger housing toward the right for removal. **Caution:** The catch spring is compressed even when at rest, so control it during removal. If the catch is very tight, it may have to be pried gently off its post.

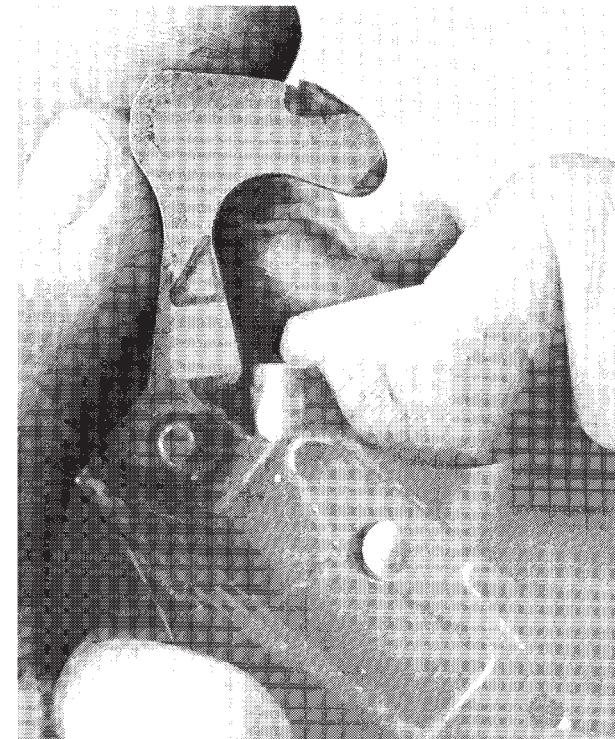
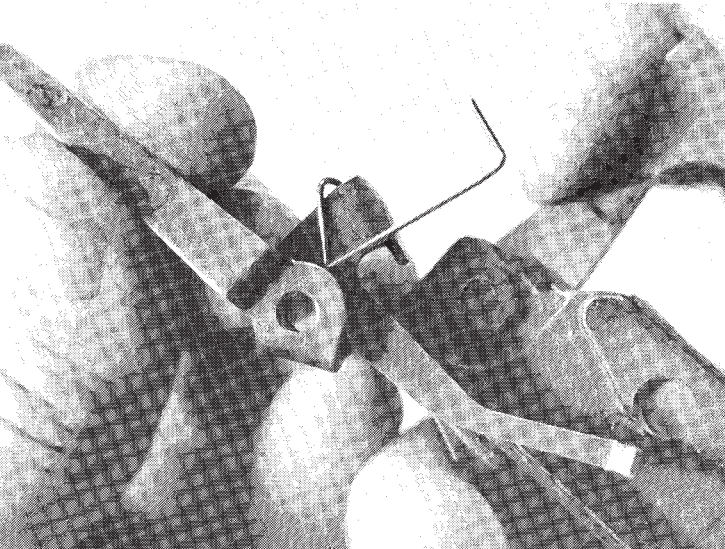
- 12.** Unhook the disconnecter spring from its slot in the left end of the front cross pin sleeve, and push out the sleeve toward the right.



- 13.** Pull the hammer back to slightly depress the hammer spring plunger, and relieve tension on the disconnecter, and push the hammer and disconnecter pivot pin toward the right, just far enough to clear the disconnecter.

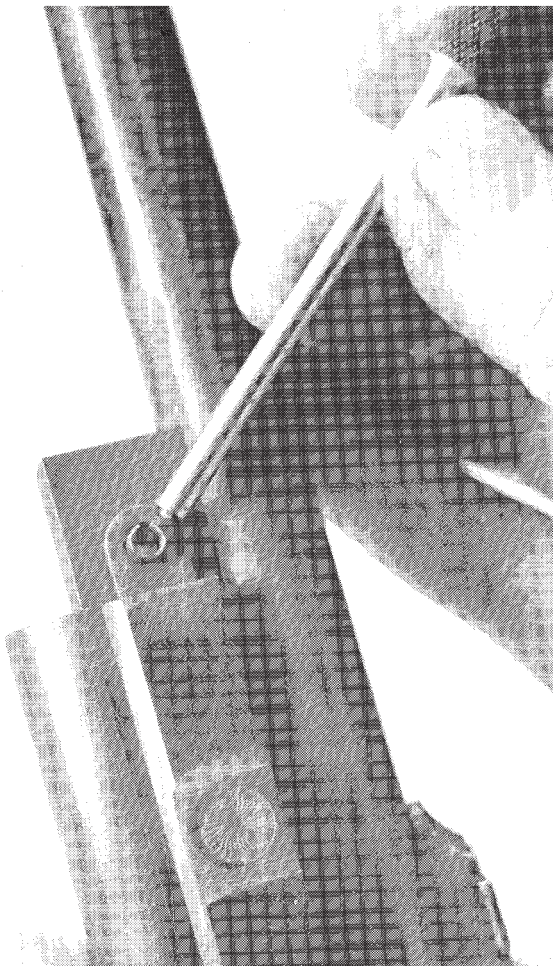
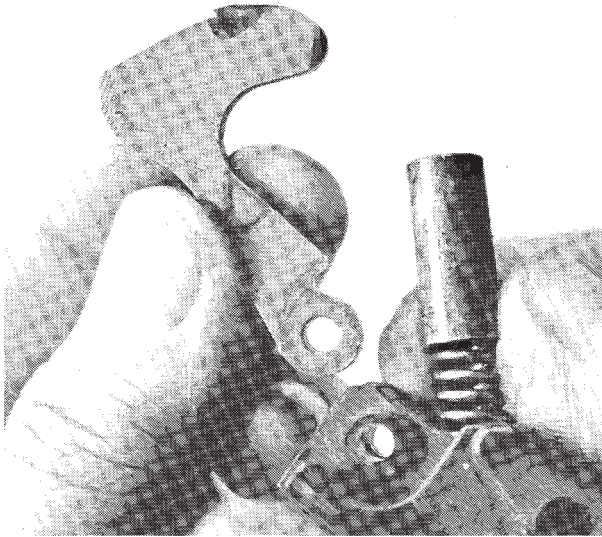


- 14.** Remove the disconnecter and its spring. Keep a firm grip on the hammer during this operation, with its spring plunger slightly depressed. The disconnecter spring is easily separated from the disconnecter after the part is removed.

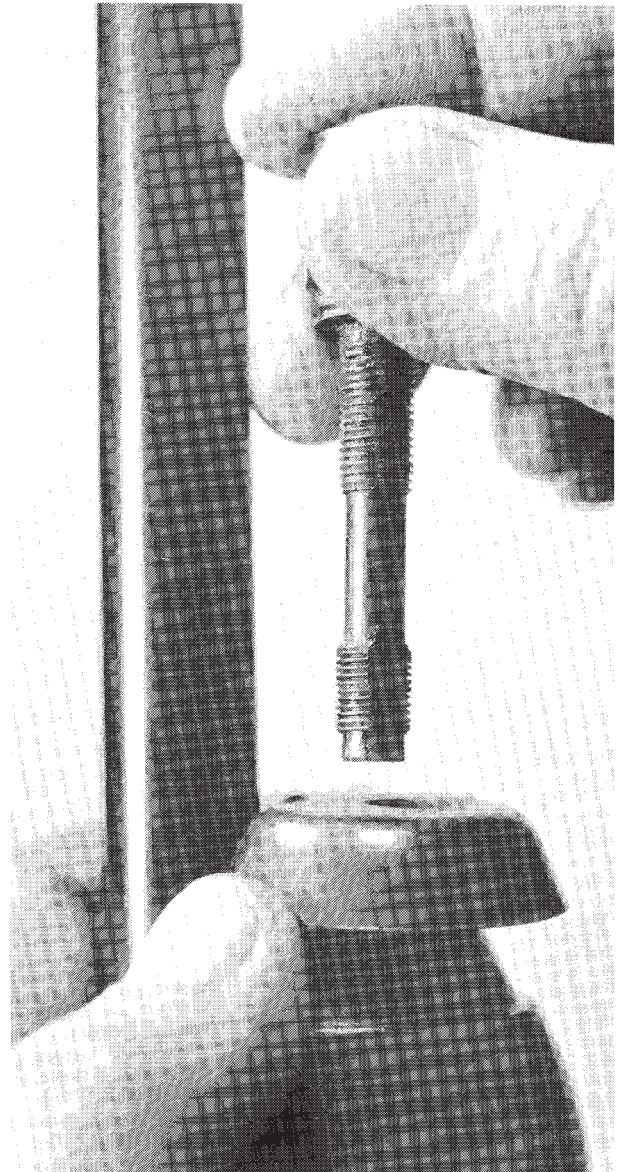


- 15.** Ease the hammer forward while holding and restraining the plunger, slowly releasing the tension of the spring.

- 16.** Push the hammer pivot pin out toward the right and take off the hammer. Remove the hammer plunger and spring from their recess in the trigger housing.

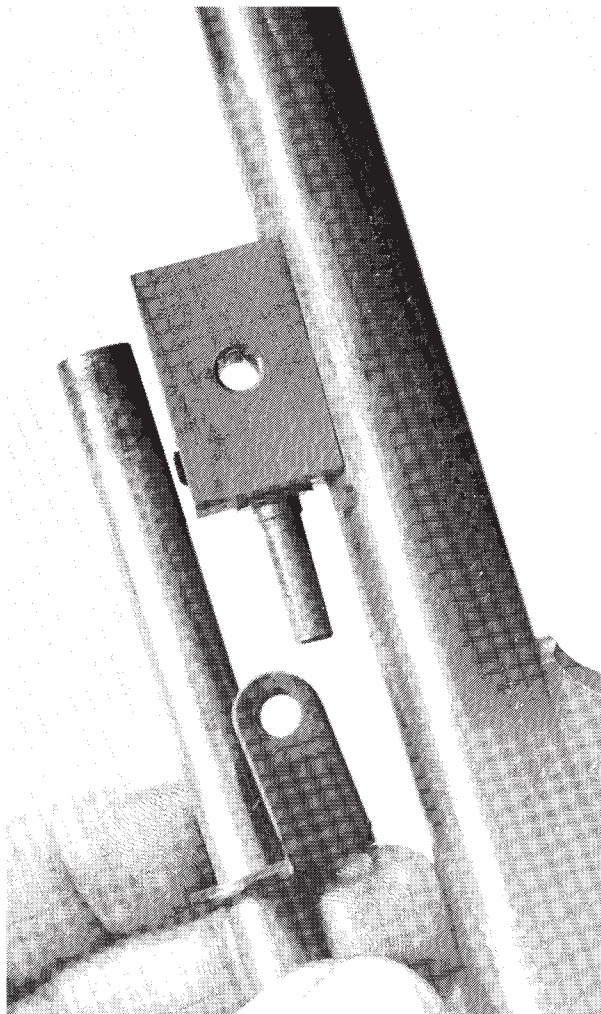


- 17.** The buttstock is retained by a through-bolt from the rear, accessible by taking off the buttplate. Use a B-Square stock tool or a large screwdriver to unscrew the bolt, and remove the stock toward the rear. Take care not to lose the stock bearing plate, mounted between the stock and the receiver. The forend is retained by a large screw in its forward tip. Remove the screw, and take off the forend cap. The forend can then be slid forward and off.

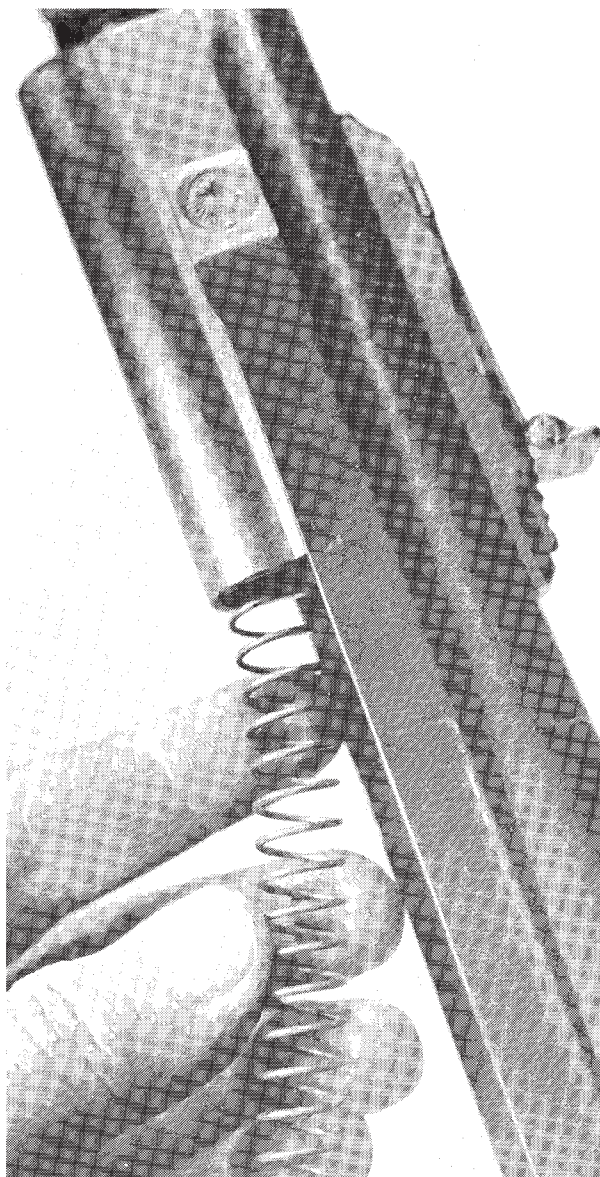


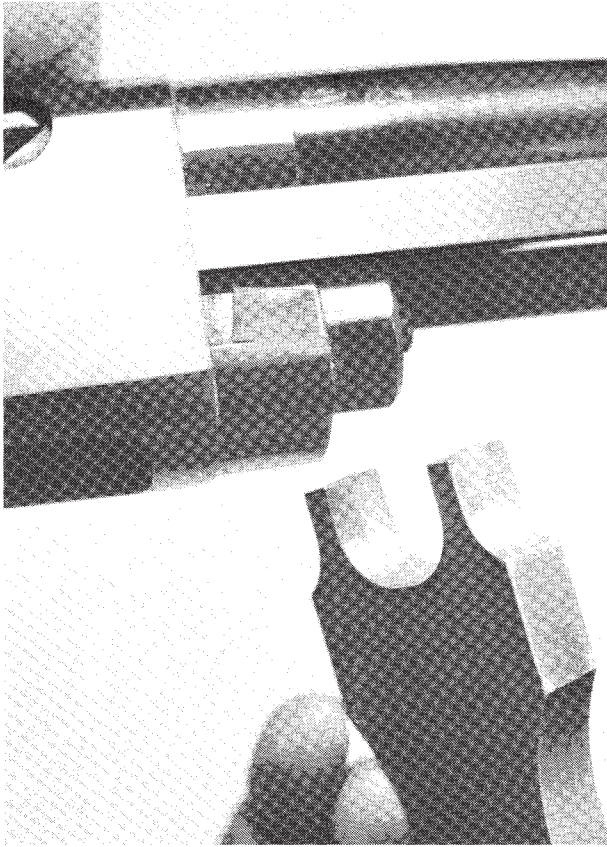
- 18.** Use a roll pin punch to drift out the action tube support pin, the large cross pin in the gas tube housing.

- 19.** Draw the bolt all the way to the rear, and move the action tube support bracket back off the gas tube housing. Tip the action tube downward, and slide it toward the front when it has cleared the lower edge of the gas tube housing. Take care not to release the bolt at this time, as it is very important to avoid damage to the gas tube.



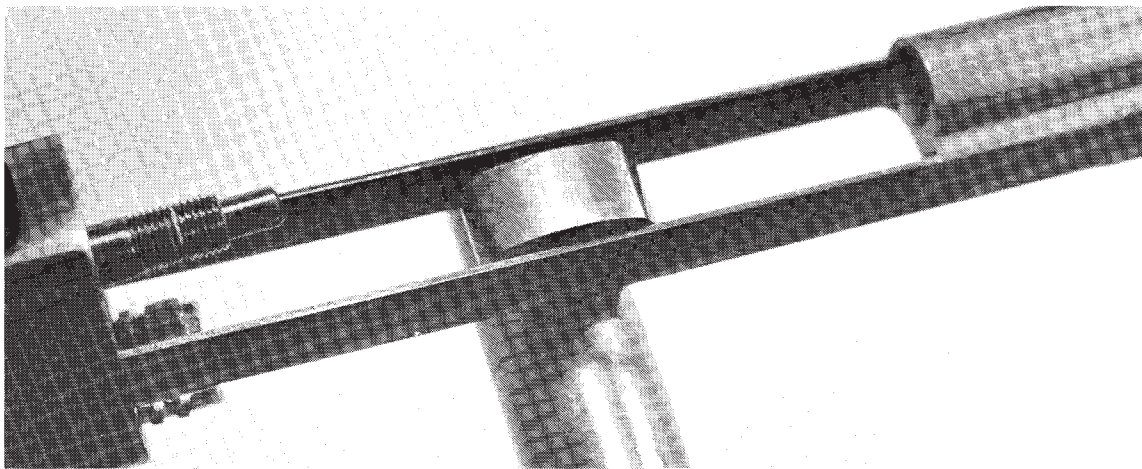
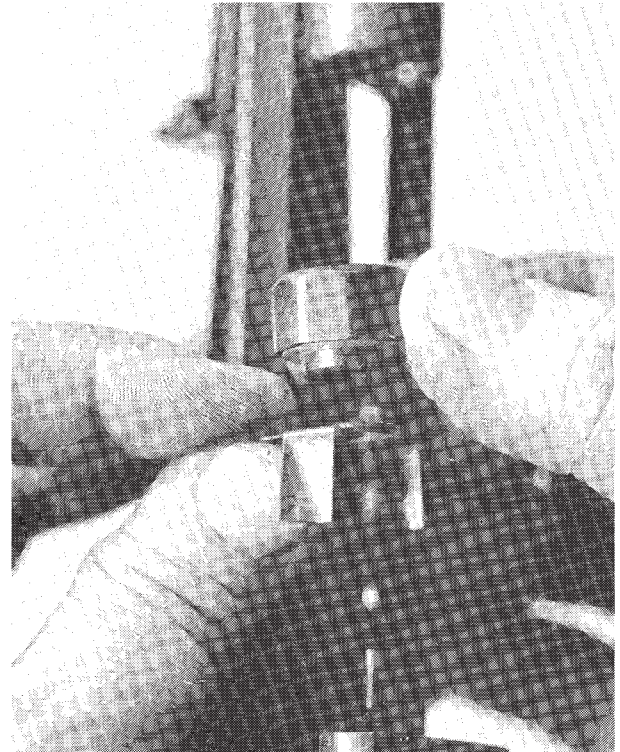
- 20.** Release the bolt very slowly as the action tube is withdrawn, easing the tension of the recoil spring. Remove the recoil spring from the rear of the action bar sleeve. It will still have some tension, so control it and ease it out.





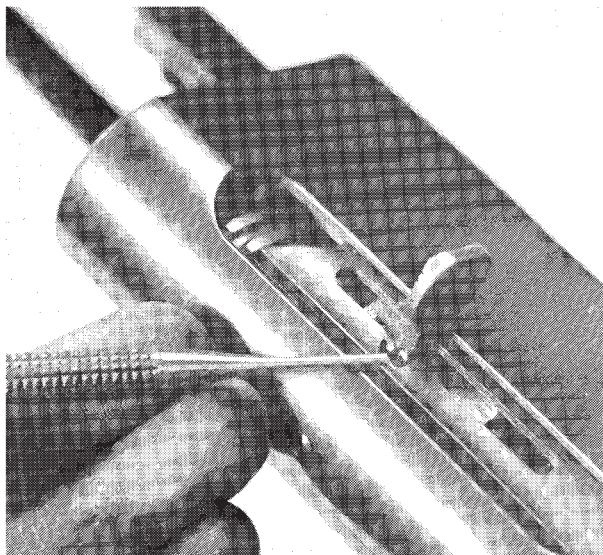
21a. With a Brownells wrench, as shown or an open-end wrench of the proper size, turn the barrel nut counter-clockwise (front view) and remove it. Take off the forend stabilizer spring, mounted behind the nut.

21b. If the barrel nut has never been removed, it will be quite tight, and it may be necessary to rap the wrench handle with a hammer to start the nut.



22. Move the bolt partially toward the rear to clear its locking lugs from the barrel, and move the barrel forward out of the receiver. Move the bolt back to the front to allow space between the action bars, and turn the barrel at a right angle to the receiver to clear its underlug projections from the action bars. Lift the barrel straight up and out of the action bars.

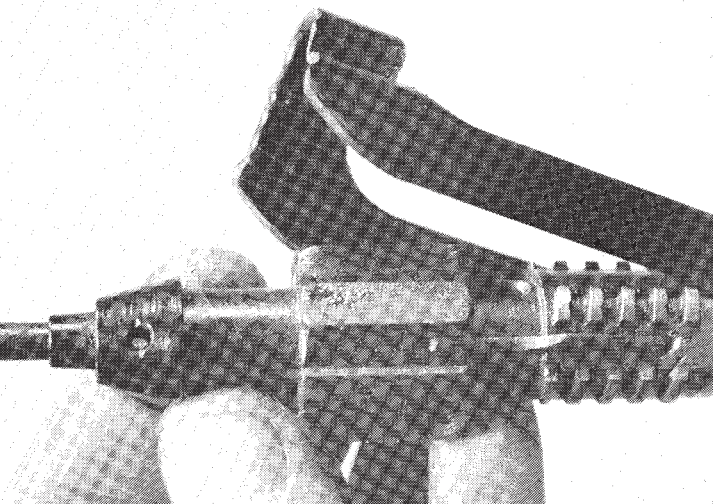
- 23.** Position the bolt handle and the ejection port cover to give access to the bolt handle retaining pin, and drive out the pin downward. Remove the bolt handle toward the right.



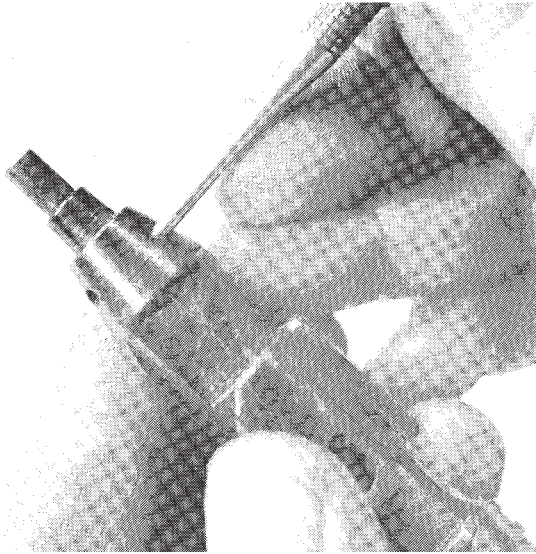
- 24.** Remove the bolt and action bar assembly toward the front, taking off the ejection port cover as it emerges from the receiver.



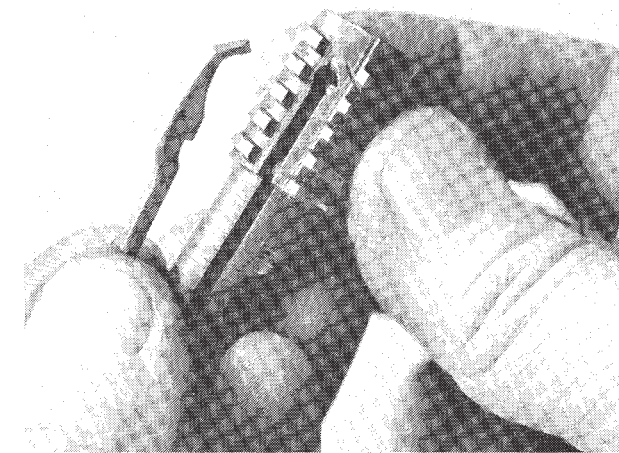
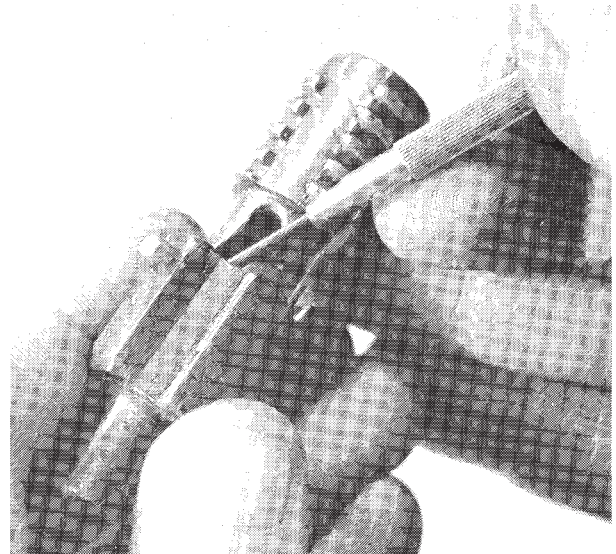
- 25.** The bolt is easily detached from the action bar assembly by moving it downward, turning it slightly, and taking it off toward the rear.



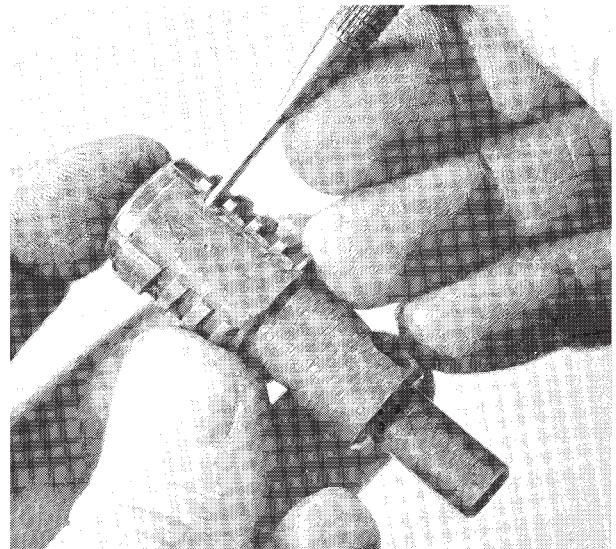
- 26.** The firing pin is retained in the bolt by a cross pin at the rear, and the firing pin and its return spring are removed toward the rear.



- 27.** Insert a small screwdriver into the cam pin track at the front to lift the cam pin out of its hole in the bolt carrier. The bolt can then be separated from the carrier.

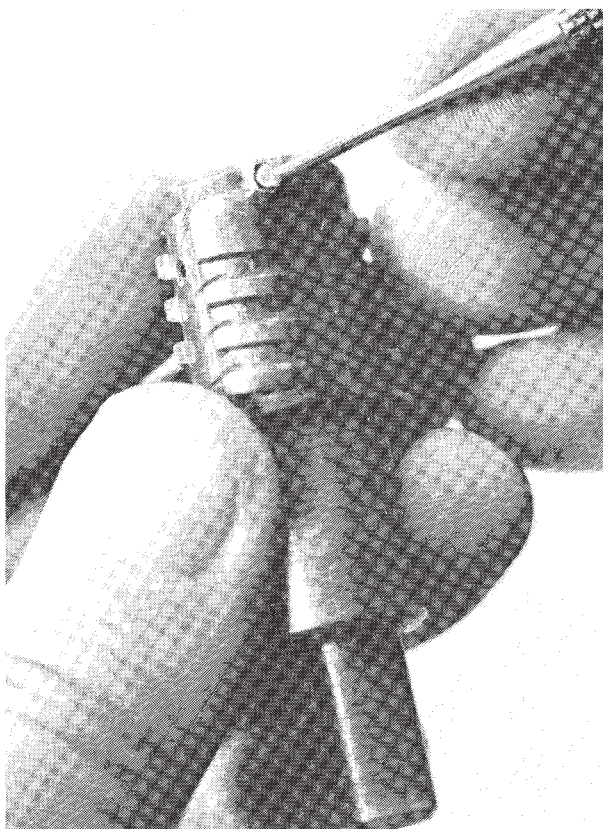


- 28.** The bolt latch can now be moved toward the rear and upward for removal. Take care that the bolt latch pivot and plunger, and their springs, are not lost from their holes beneath the bolt latch—these are very small parts.



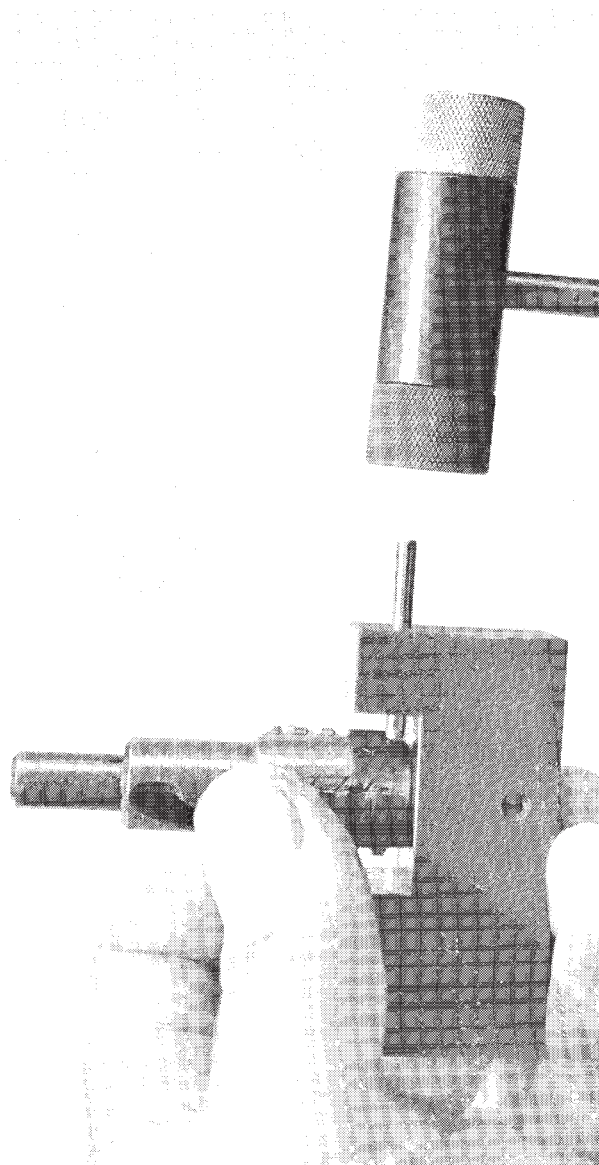
- 29.** The ejector is removed by drifting out its cross pin near the front of the bolt. **Caution:** The ejector spring is quite strong, so restrain the ejector during removal, and ease it out.

- 30.** The extractor is mounted inside the cartridge head recess at the front of the bolt, and is held in place by a small rivet on the left side. Except for replacement of a broken extractor, this assembly should not be disturbed, as attempted removal will almost always break the extractor.

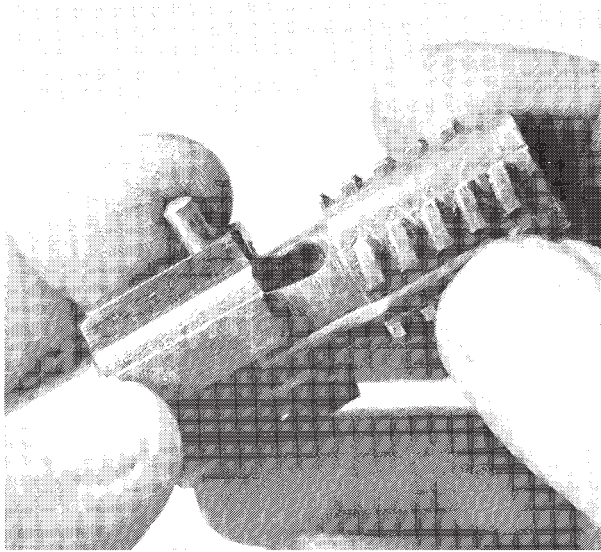


Reassembly Tips:

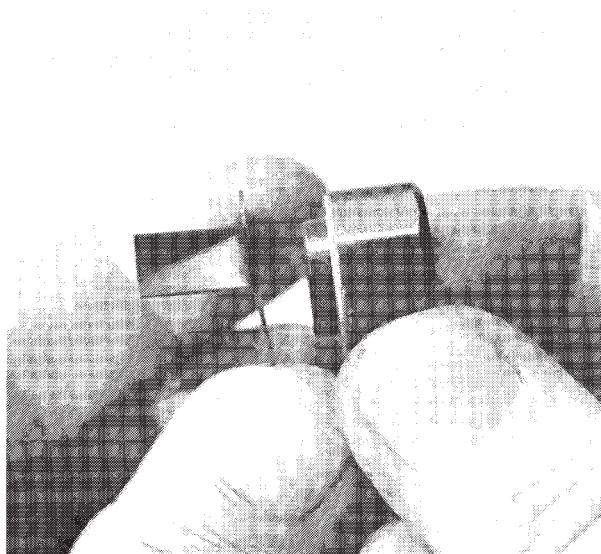
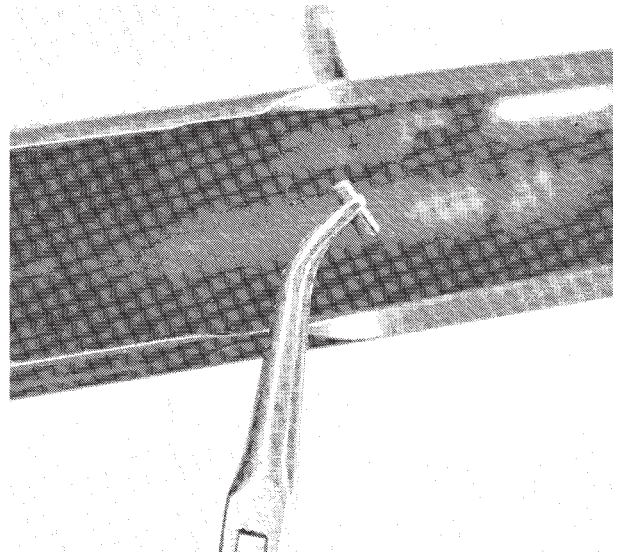
- 1.** If the extractor has been removed for replacement of a broken one, installing and setting the new rivet can be very difficult, unless a tool such as the one shown is used. Available from B-Square, it is designed specifically for this job on all of the guns from Remington that have an extractor of this type.



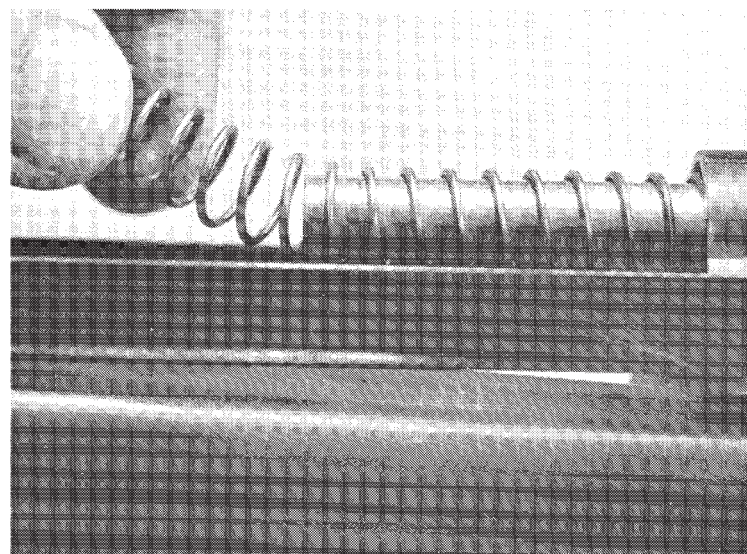
2. When replacing the bolt carrier on the rear of the bolt, note that there is a notch on the carrier which must align with the tail of the bolt latch. The bolt latch must be depressed slightly as the parts are rejoined.



3. When replacing the bolt handle retaining pin, note that it has lengthwise stake marks at one end, and the opposite end should be inserted. Grip the pin with sharp-nosed pliers, insert it from inside the receiver, and drive it upward into place. Be sure the bolt handle is fully in place, and properly aligned with the hold, before driving the pin.

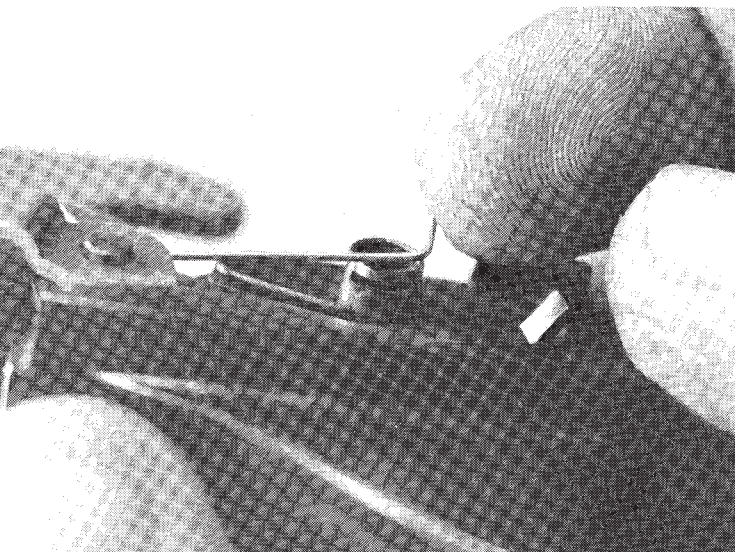


4. When replacing the barrel nut and forend stabilizer spring, be sure they are installed as shown, with the outer flanges of the stabilizer at the top, and the rebated nose of the barrel nut toward the rear.

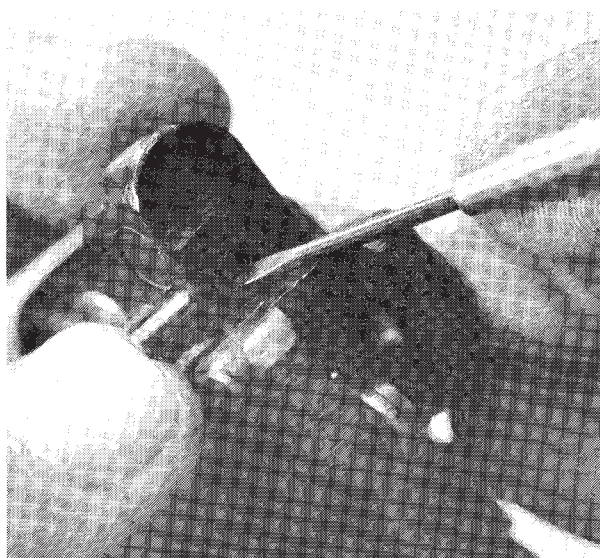


5. When replacing the recoil spring, partially insert the action tube, and slip the spring onto it from the rear, compressing the spring until its rear tip can be lifted onto its stud at the center of the barrel nut bolt. Then push the action tube all the way to the rear. Once again, take care that the projecting gas tube is not damaged during replacement of the tube and its support bracket.

- 6.** When replacing the front trigger group cross pin sleeve, note that it must be oriented with its slot in the left end on the underside, so the disconnecter spring can be hooked into the slot.



- 7.** When replacing the safety spring, use a small screwdriver to depress the spring while inserting the cross pin, pointed end first.





Remington 770

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the Remington 770 also apply to the following guns:

Remington 710

Data: Remington 770

Origin: United States

Manufacturer: Remington Arms Co., Mayfield, KY

Cartridge: .243 Win. - .300 Win. Mag.

Magazine Capacity: 5 rounds

Overall Length: 42.5 inches

Barrel Length: 22 inches

Weight: 8.5 pounds

The Remington 770 is the upgraded descendant of the company's earlier low price point rifle, the model 710. For the most part it is the same rifle. It is shipped with a hunting rifle scope, synthetic stock, and a remarkably sub \$400 price tag. It is chambered in many of the common calibers, and has the distinction of having a press fitted barrel, rather than the usual threaded type. The youth model makes an excellent low cost starter rifle.

Disassembly:

1. To remove the bolt, open the bolt, then lift up on and rotate the bolt stop up and to the front. Then pull the bolt from the receiver.



2. While holding the bolt with the bolt face down and the bolt bottom toward you, turn the bolt plug (shroud) about an eighth of a turn clockwise, with the cocking piece visibly past its notch. This will free the entire firing pin assembly.

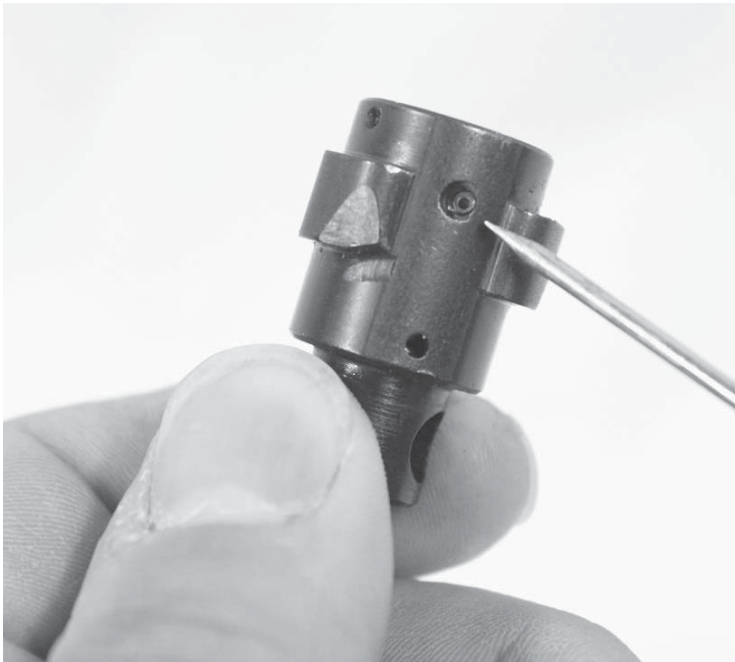


3. Pull the firing pin assembly from the rear of the bolt body.

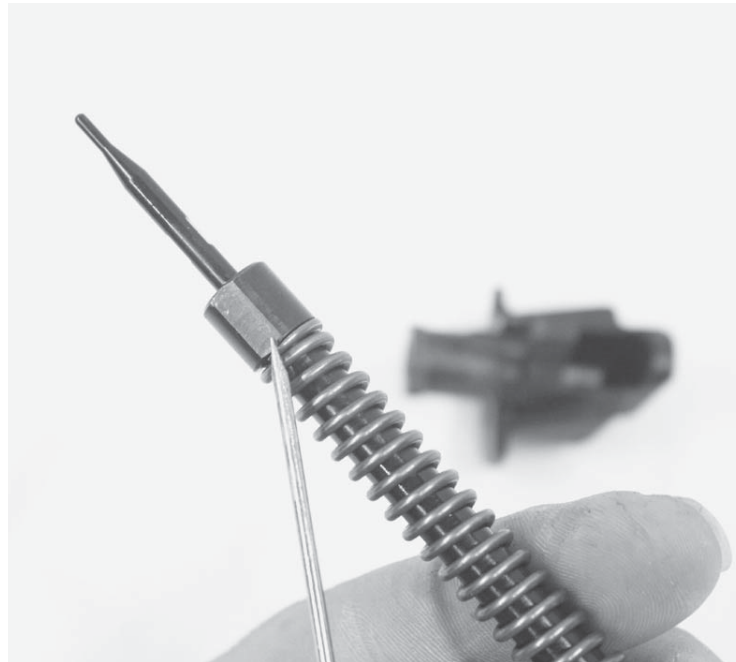
- 4.** To remove the bolt head from the bolt body, push out this pin.



- 5.** This is the extractor. As on other Remington models, it can be removed by use of a small screwdriver or other small flat tool. However, doing so will likely damage the extractor, so don't do it unless it is already damaged and needs to be replaced.

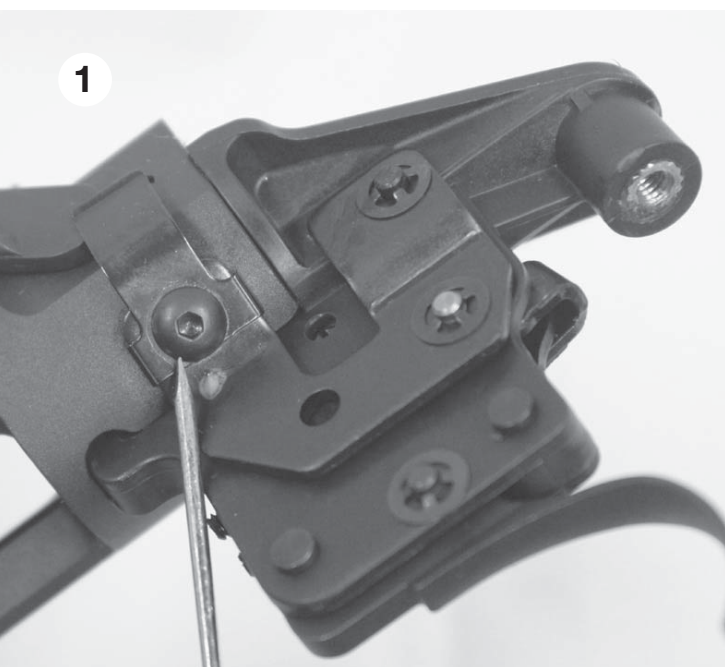
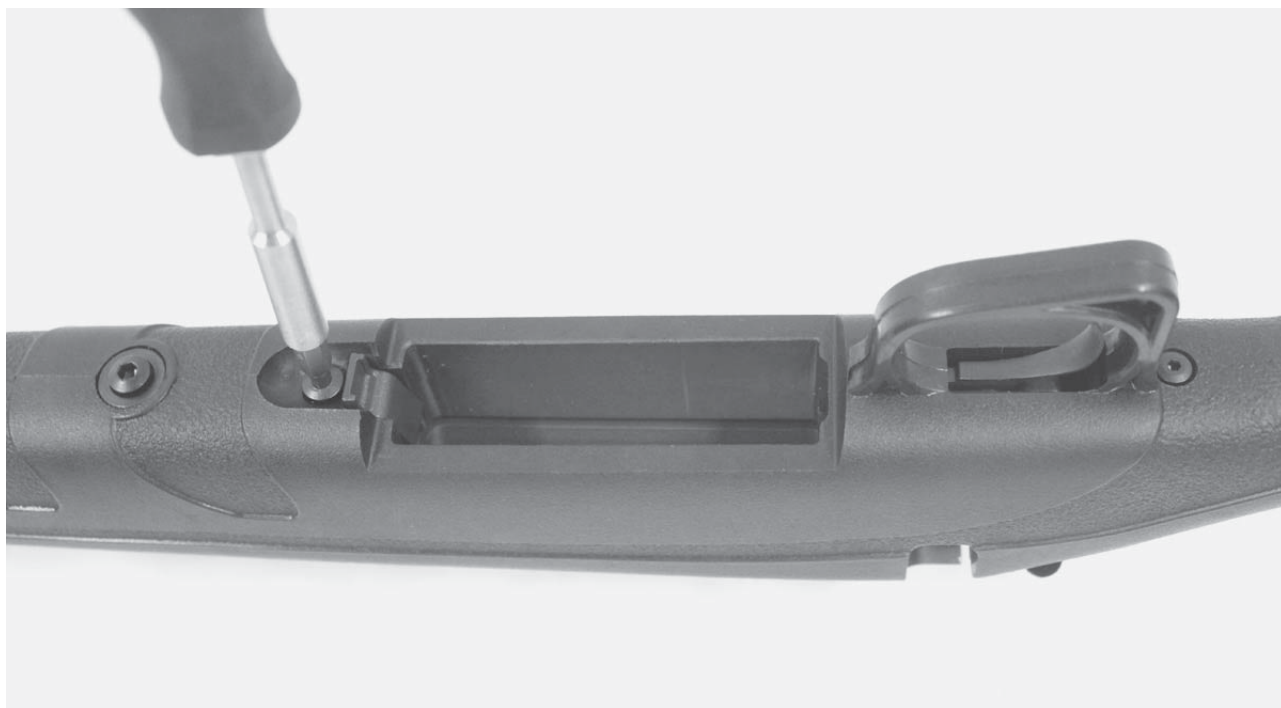


- 6.** The ejector and spring can be removed by driving out this pin.



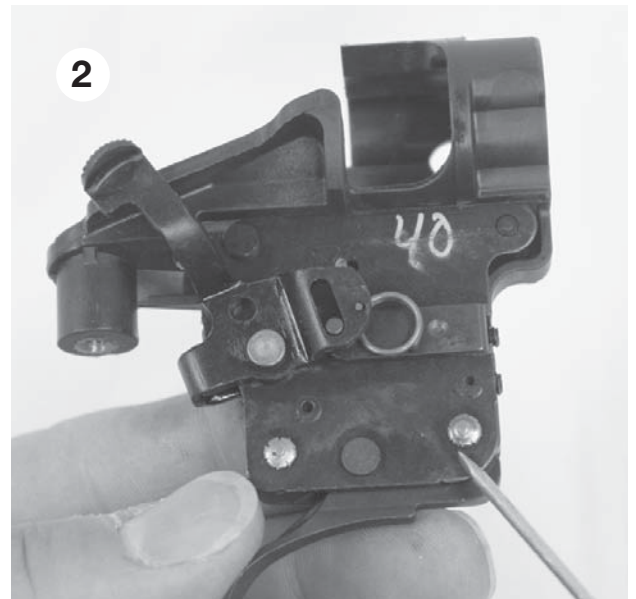
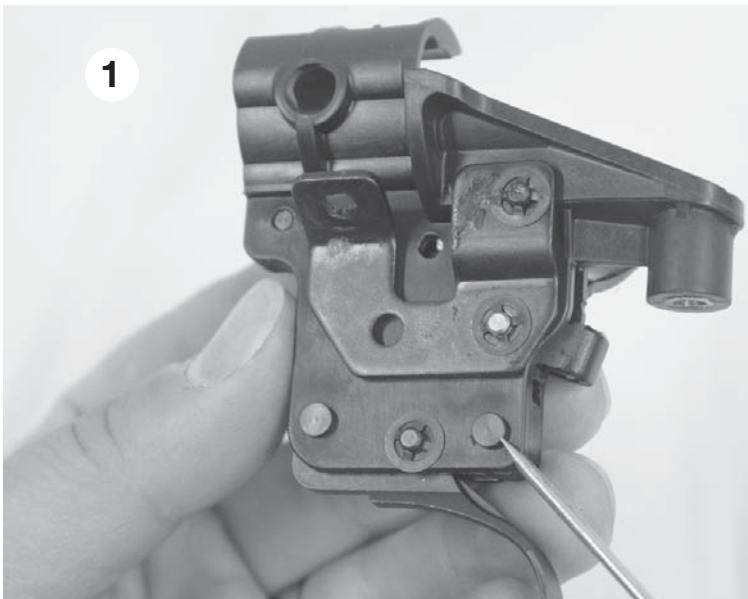
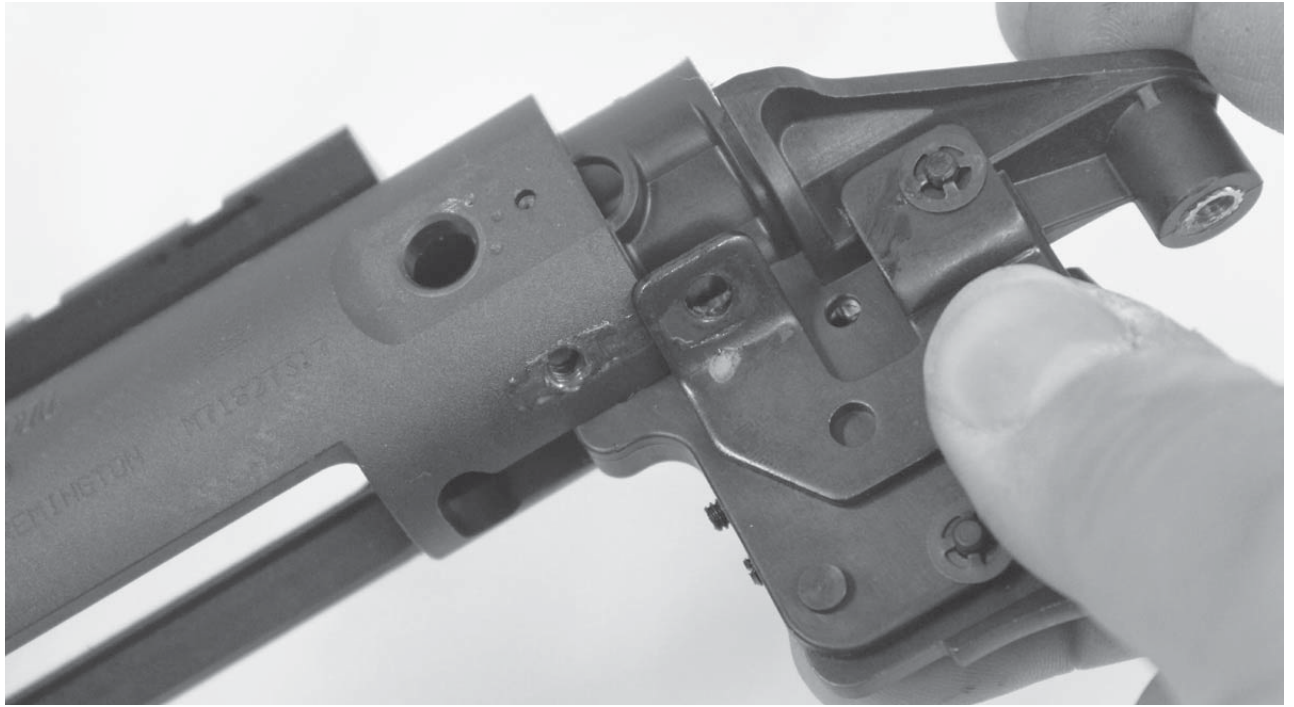
- 7.** The firing pin assembly can be disassembled by unscrewing the firing pin from the cocking piece and bolt plug. This will also free the firing pin spring.

- 8.** All three action bolts must be removed from the rifle in order to separate the barreled action from the stock. They are located one behind the trigger and two forward of the magazine well.



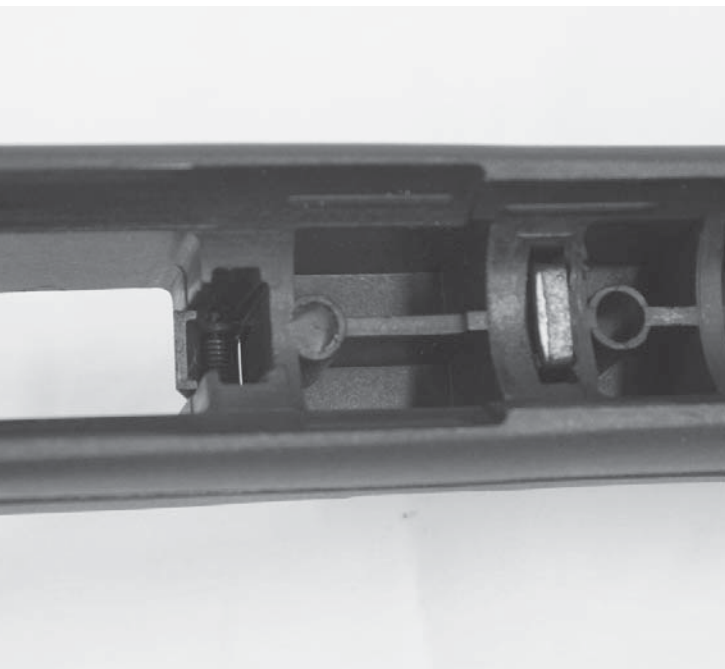
- 9.** Remove this screw to free the takedown lever's spring (picture 1), then remove the takedown lever (picture 2).

- 10.** Removing the takedown lever spring screw also releases the trigger assembly. The trigger assembly can then be pulled out to the rear of the receiver.



- 11.** The trigger assembly is riveted and pinned together so that it is not worth the trouble to take apart; it was designed to be replaced as a complete unit (picture 1). However, should it be necessary to do so, the three four-prong retaining rings will have to be removed (and replaced, as they will likely break), and the two rivets removed (again, and replaced, picture 2). The left side of the trigger housing is integral with the “bolt guide” section, with the right side being made of steel.

- 12.** The magazine catch assembly is pressed into the stock and can be removed by tapping it out from the bottom. The pin and spring will separate from the catch.



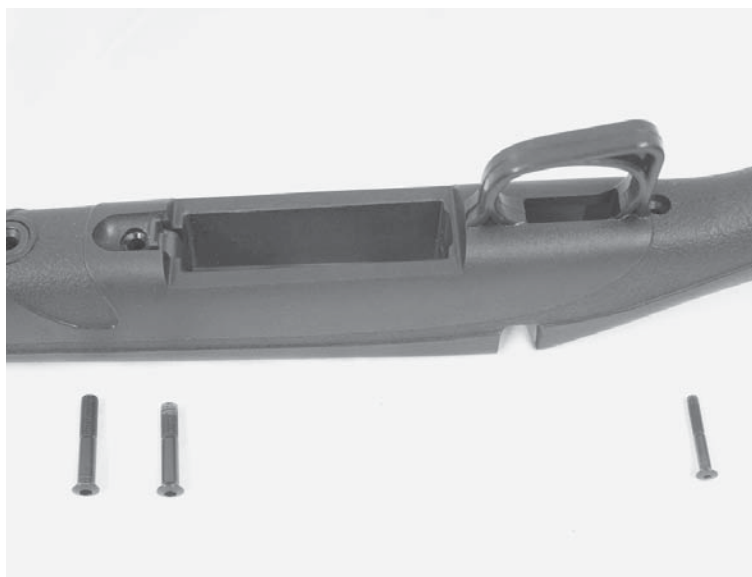
- 13.** The magazine floorplate can be separated from the body by prying this tab in and up. The spring and follower will then be freed, as well.



Reassembly Tips:



- 1.** The bolt pin should be reinserted when the ejector in the bolt head is on the opposite side of the bolt assembly from the bolt handle.



- 2.** The foremost action screw is the same type as the middle screw but slightly longer. Be sure to replace them in the correct holes.



Remington Model 788

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Remington Model 788 also apply to the following gun:

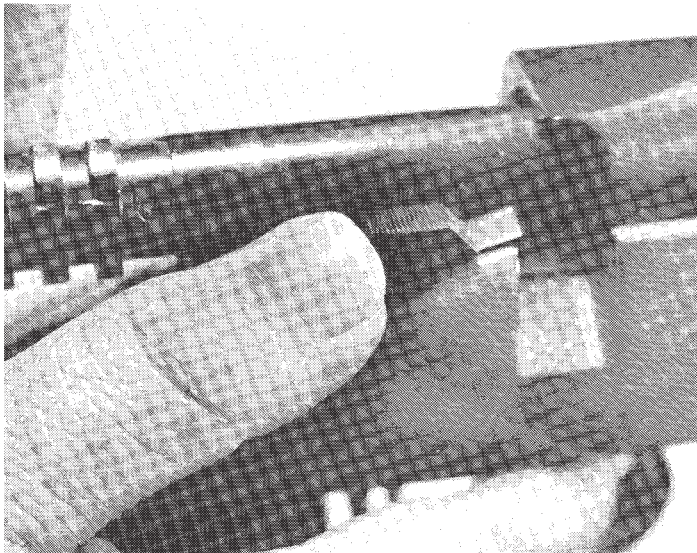
Remington Model 788 Carbine

Data:	Remington Model 788
Origin:	United States
Manufacturer:	Remington Arms Company Bridgeport, Connecticut
Cartridges:	222, 223, 22-250, 308, 243, 6mm Remington, and 44 Magnum
Magazine capacity:	4 rounds in 222, 3 in others
Overall length:	41-5/8 inches
Barrel length:	22 and 24 inches
Weight:	7 to 7-1/2 pounds

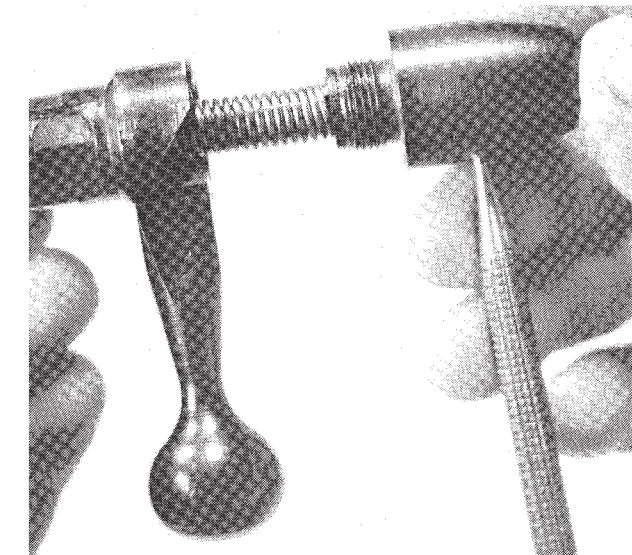
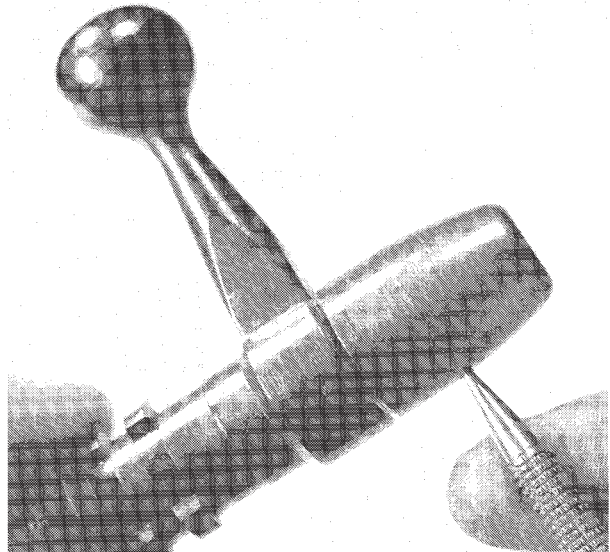
A glance at the cartridges listed for the Model 788 may lead some to believe there's an error here, but the gun was actually offered for a short time in 44 Magnum chambering. For those who have the 44 Magnum version, it should be noted that the bolt is different, having a two-piece construction and a non-rotating bolt head. The Model 788 was introduced in 1967, and was discontinued in 1984.

Disassembly:

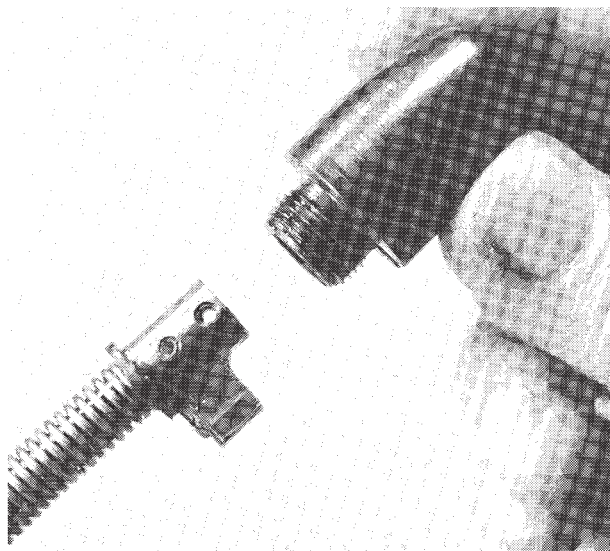
1. Remove the magazine. Open the bolt and move it toward the rear, while pushing the safety forward beyond its off-safe position. Remove the bolt from the rear of the receiver.



2. Insert a small-diameter drift punch into the tiny transverse hole in the bolt end piece, being sure that it goes deep enough to enter the hole in the striker head inside.

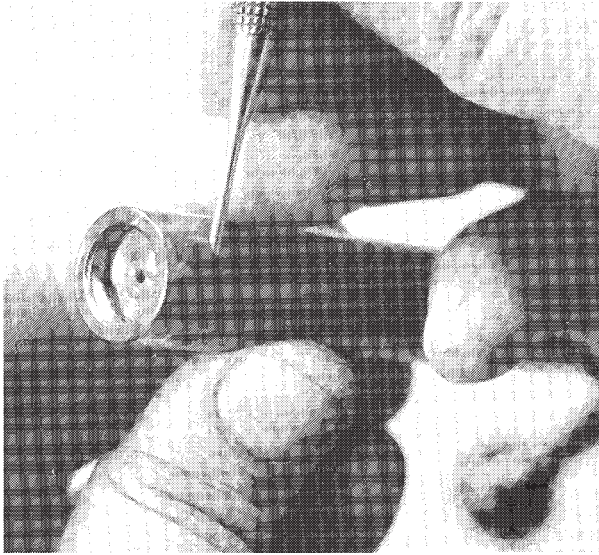


3. Leaving the drift punch in place, unscrew the bolt end piece and striker assembly, removing it toward the rear.

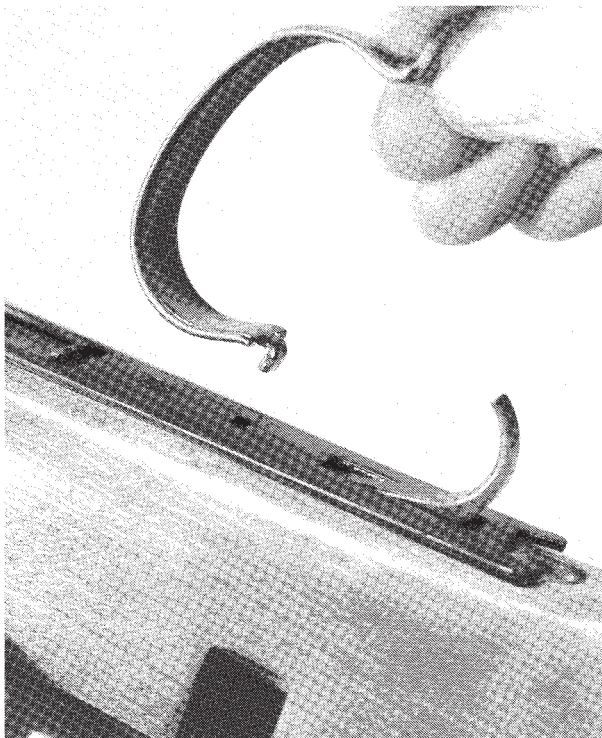
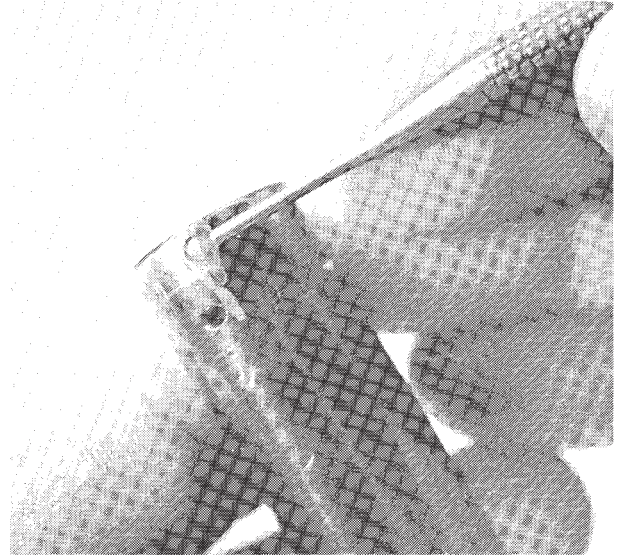


4. Grip the heavy front portion of the striker firmly in a vise, and exert forward pressure on the end piece while removing the drift punch from the hole. **Caution:** *The compressed spring is powerful, so keep a firm hold on the end piece.* Slowly ease the end piece off the rear of the striker assembly, and remove it toward the rear. The striker assembly can be taken apart by drifting out the retaining cross pin in the striker head, but this is definitely not recommended in normal takedown.

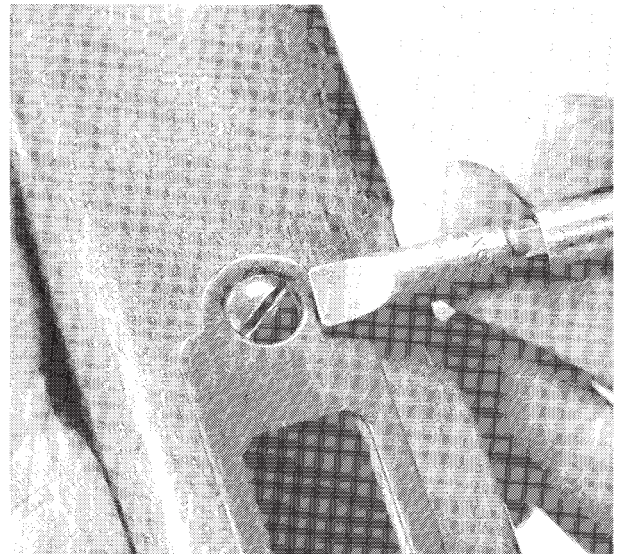
5. Drifting out the cross pin near the front of the bolt will release the ejector and its spring toward the front. **Caution:** *The spring is a strong one, so control the parts and ease them out.*



6. The extractor is retained inside the cartridge head recess in the bolt face by a tiny rivet, and in normal disassembly its removal is not recommended, as the extractor will almost invariably break. If removal of a broken extractor is necessary, drift out the rivet inward, using a small-diameter punch. Note that the ejector must be removed before this is done.

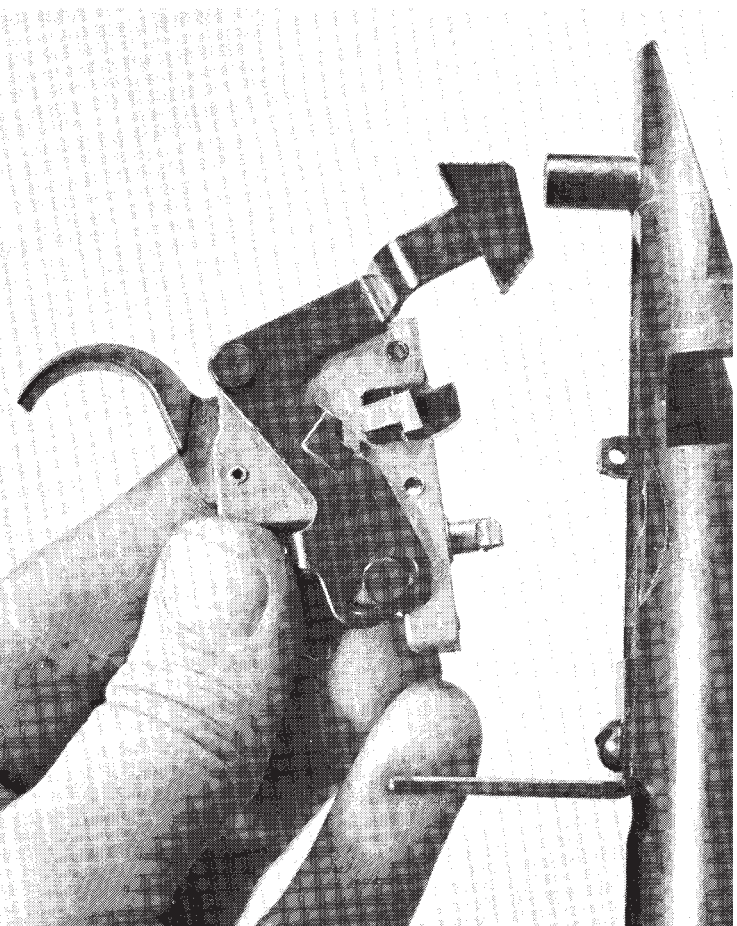
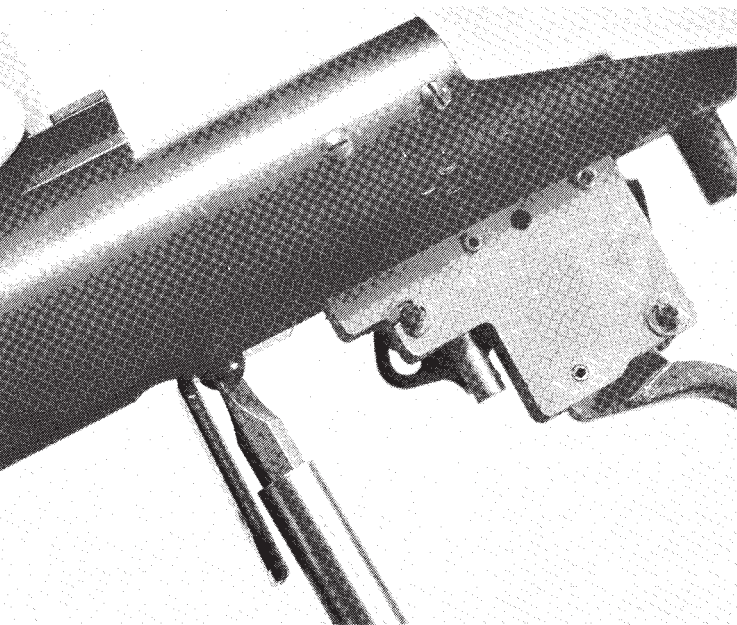


7. Remove the vertical screw at the rear of the trigger guard. Swing the guard downward and toward the front and remove it.

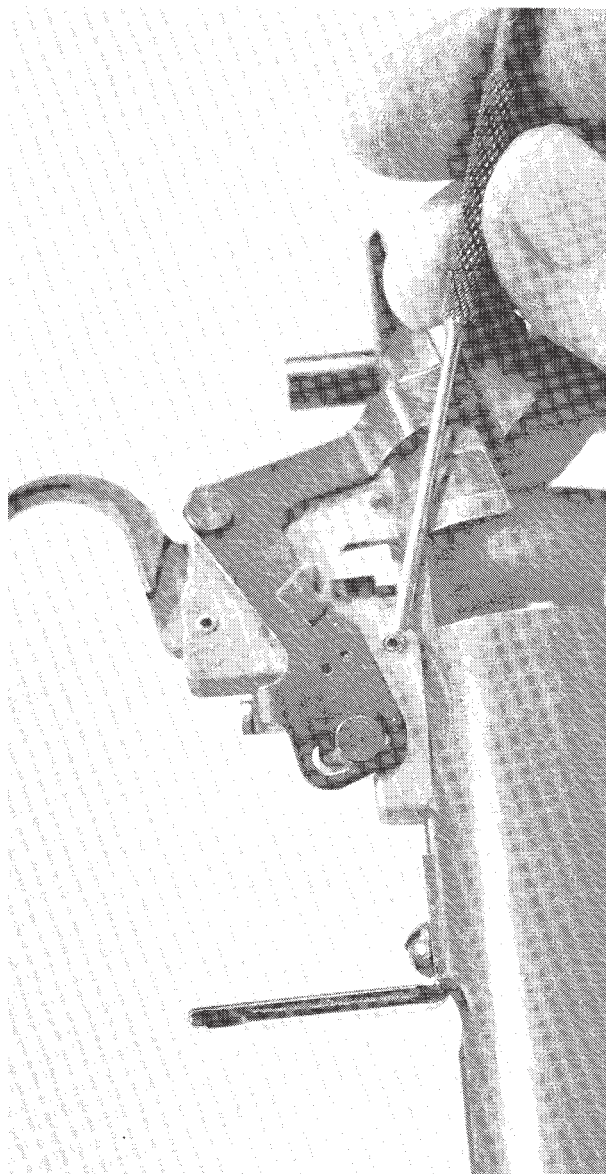


8. Remove the large vertical screw on the underside just forward of the magazine opening, and separate the action from the stock.

- 9.** The magazine guide bar and catch piece can be removed by backing out the vertical screw in its rear tail, on the underside of the receiver.

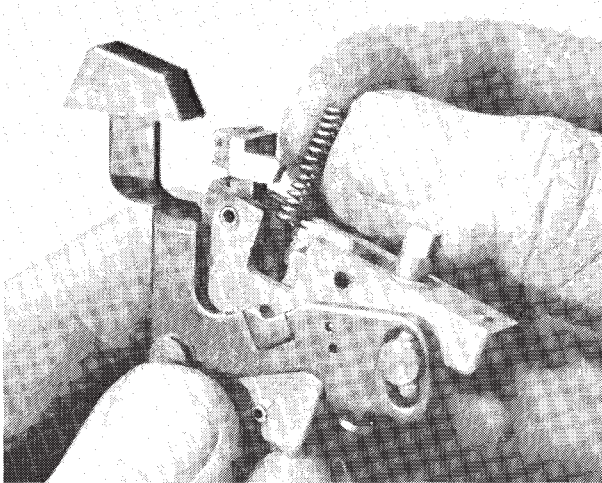


- 10.** The trigger assembly is retained by a single roll cross pin at its top center. Use a roll pin punch to drift it out.

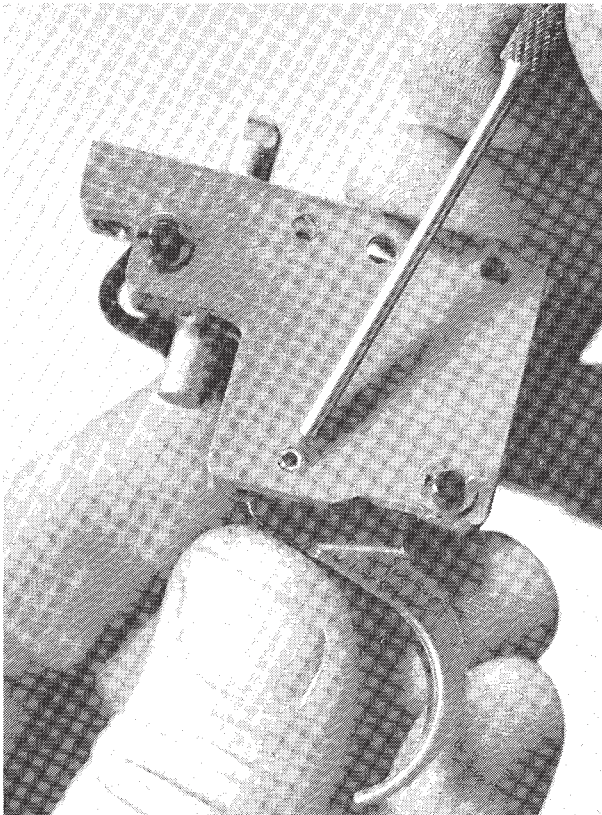
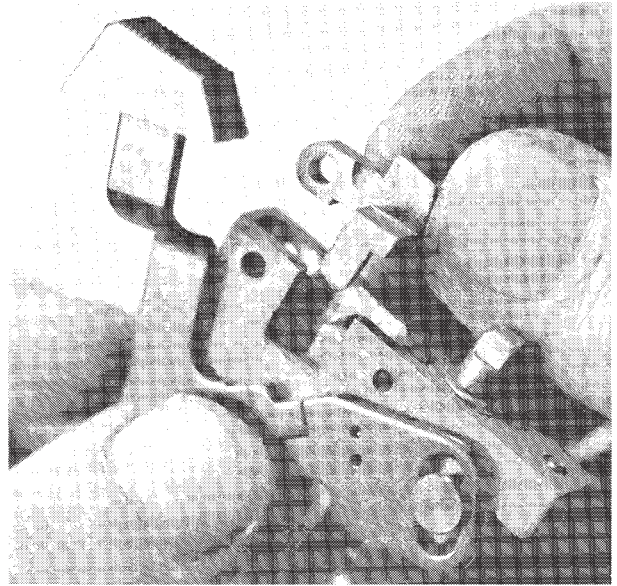


- 11.** Remove the trigger assembly downward.

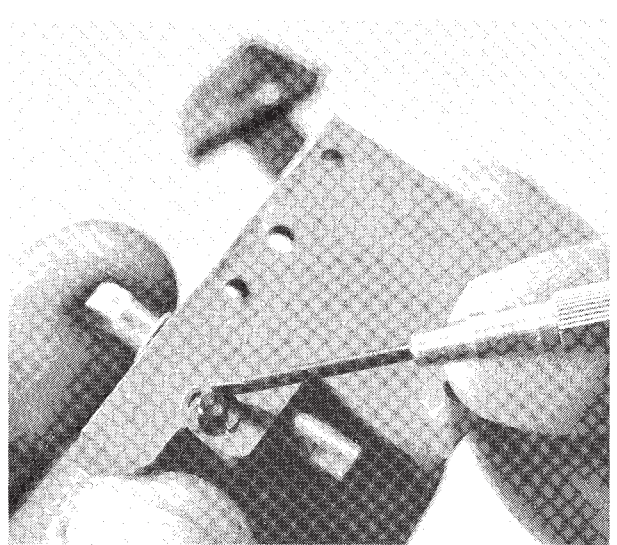
- 12.** Tipping the sear upward will allow removal of the combination sear and trigger spring.



- 13.** Drift out the roll pin at the upper rear of the trigger housing, and remove the sear upward.

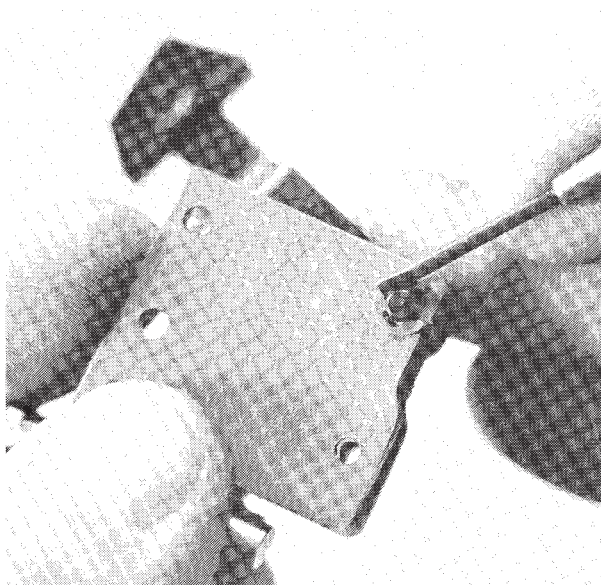


- 14.** Drift out the roll cross pin at the lower front of the trigger housing, and remove the trigger downward.

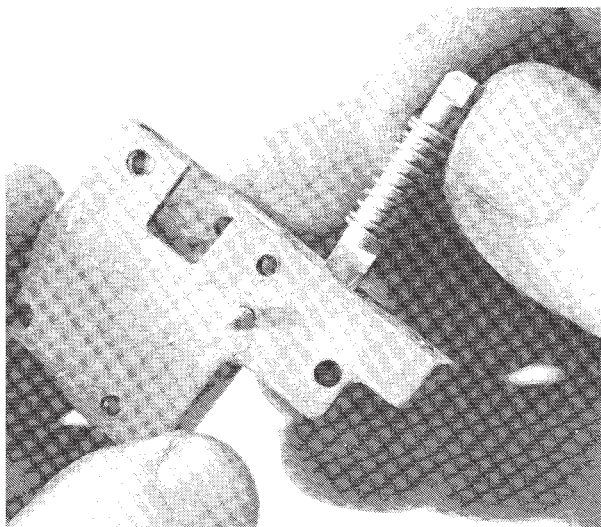
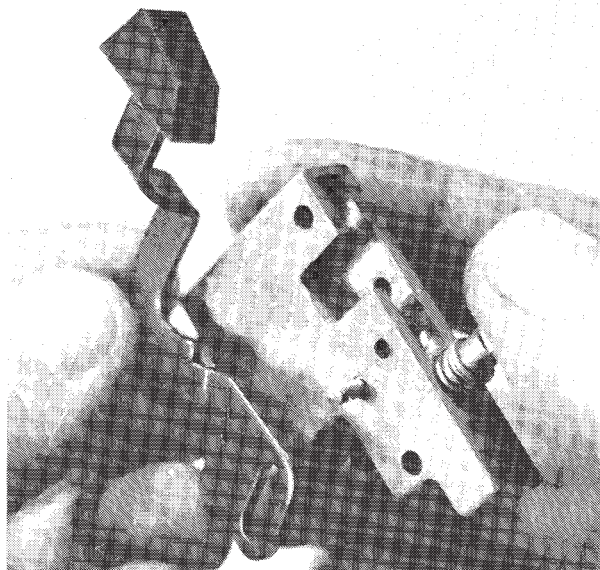


- 15.** Remove the C-clip on the left side of the trigger housing at the front, and take out the forward safety guide pin toward the right. Hold the safety against the right side of the housing, as the positioning plunger and spring will tend to force it outward.

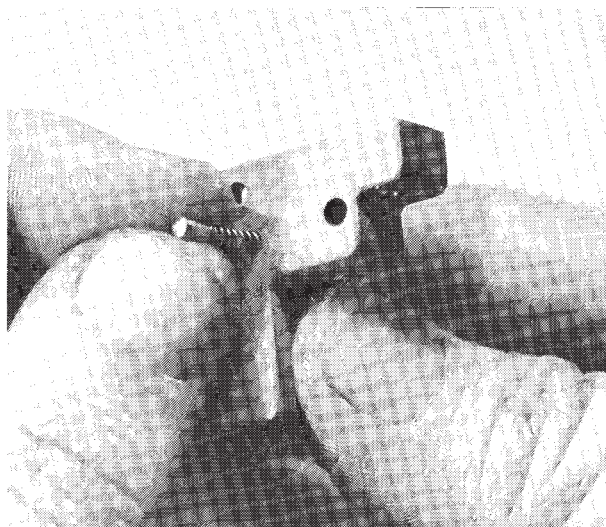
- 16.** Remove the C-clip on the left side of the housing at the lower rear, and take out the safety pivot toward the right.



- 17.** Restrain the bolt stop, and slowly ease the safety off toward the right.

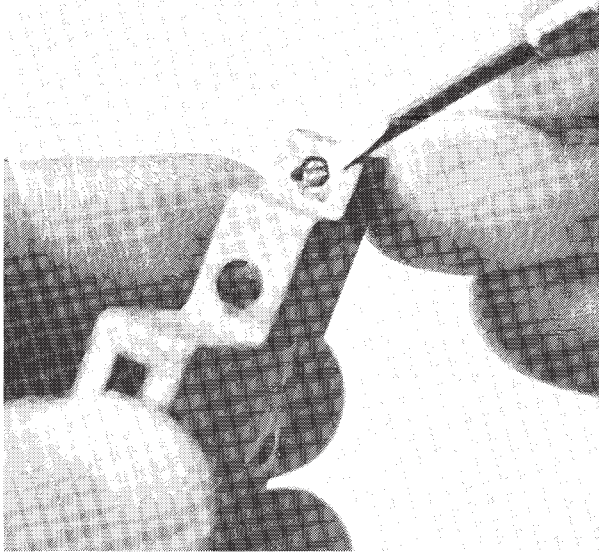


- 18.** Remove the bolt stop and its spring from the top of the trigger housing.



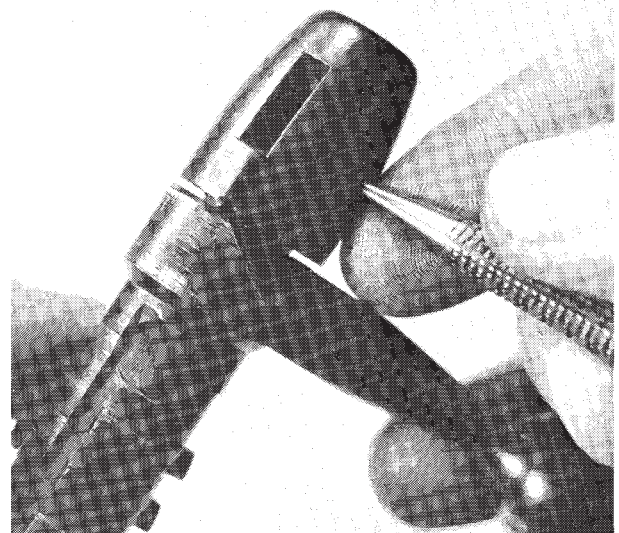
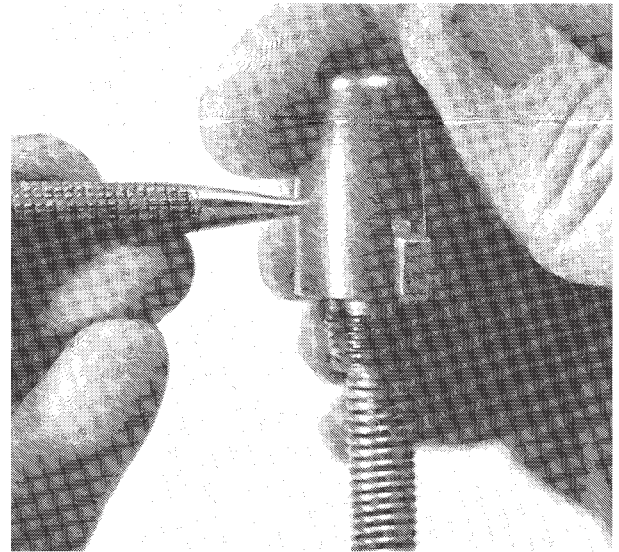
- 19.** Remove the safety positioning plunger and its spring from the right side of the housing.

- 20.** The housing tension screw, located in the front lip of the unit, is staked in place and should not be disturbed unless the housing is loose when re-mounted.



Reassembly Tips:

- 1.** When the cocking piece is at the position shown, the drift punch can be reinserted through the hole in the bolt end piece to lock the striker assembly for replacement in the bolt.



- 2.** When turning the bolt end piece and striker assembly back into the bolt, it should not be screwed down all the way. Stop it at the position shown, with the cocking lug aligned behind the full-cock detent notch, and withdraw the punch from the hole in the end piece.



Remington 7600

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the Remington 7600 also apply to the following guns:

Remington 760

Remington 7615

Data: Remington 7600

Origin: United States

Manufacturer: Remington Arms Co., Mayfield, KY

Cartridge: .243 Win. - .30-06 Spfd.

Magazine Capacity: 4 rounds

Overall Length: 42 5/8 inches

Barrel Length: 22 inches

Weight: 7.5 pounds

The Remington 7600 is the modernized version of the Remington 760. There really isn't anything new in the way of functional differences, and the takedown for the 7600 can be used for the 760. The 7600 is popular with deer hunters, with a lower price tag than its semiautomatic brother, the 7400, but firing the same selection of cartridges. The 7615 is a police/tactical model that is chambered in .223 Rem. and accepts an AR-15 magazine. An accommodation should be made for the different magazine, but otherwise the takedown is the same.

Disassembly:

1. Use a large, flat-bladed screwdriver to remove the fore-end screw.



2. Remove the fore-end by pulling it forward and off the slide.

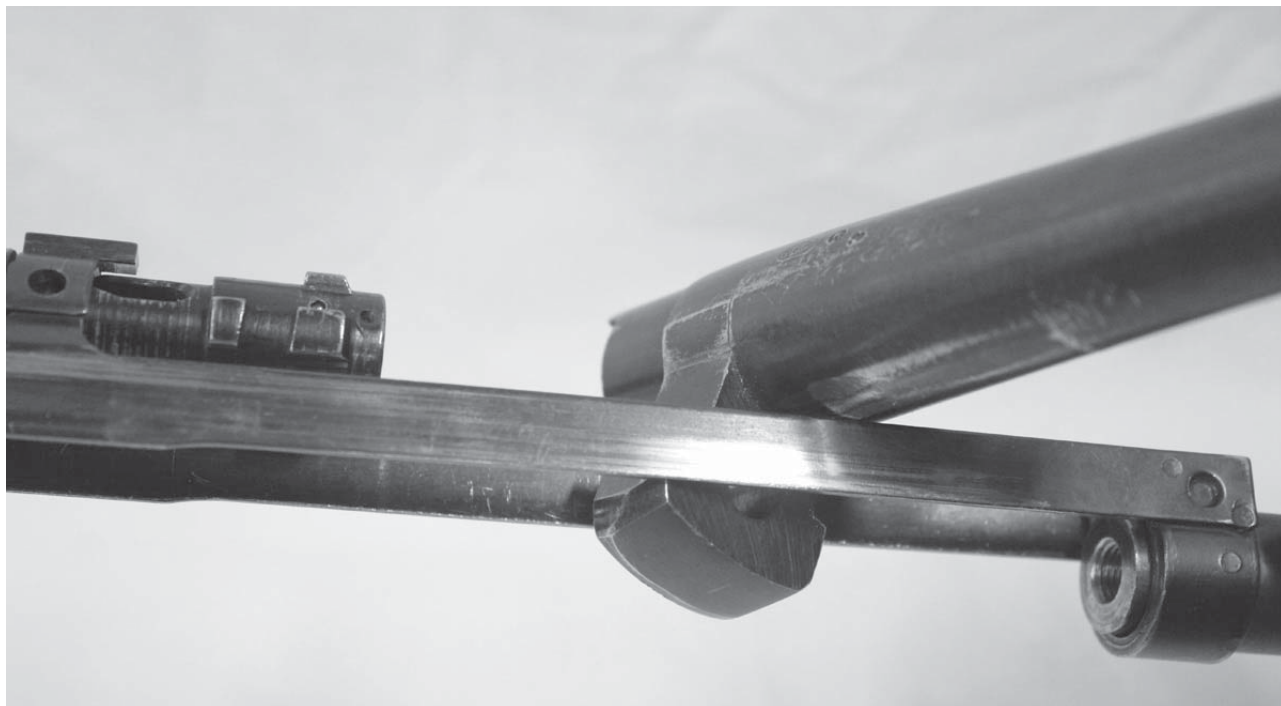


3. Using an appropriate sized punch, unscrew the fore-end tube from the receiver and push it forward to rest in the slide.



4. The barrel, slide, and bolt can then be pulled forward out of and off the receiver. The plastic bolt dust cover will fall free once the bolt clears the receiver.

- 5.** Angle the barrel 90 degrees to the side to allow the barrel lug to fit between the slide rails and fully separate the barrel from the slide. The fore-end tube can also be removed from the fore-end slide assembly.



- 6.** The bolt body is snap-fit to the slide and need not be removed for general maintenance. The bolt pin will likely fall out of the left side of the bolt.

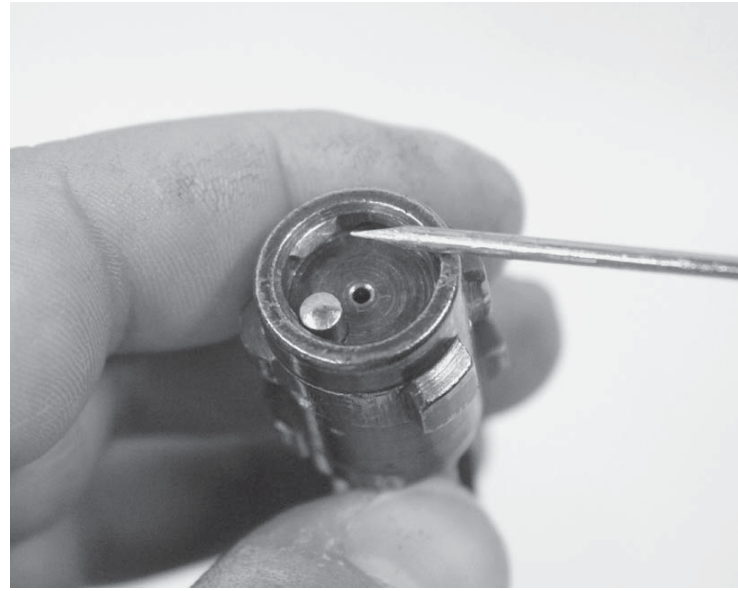


- 7.** Rotate the bolt head 180 degrees until the ejector is “up,” then push the bolt head all the way back. This will expose the firing pin retaining pin. Drive out this pin to remove the firing pin and firing pin spring.

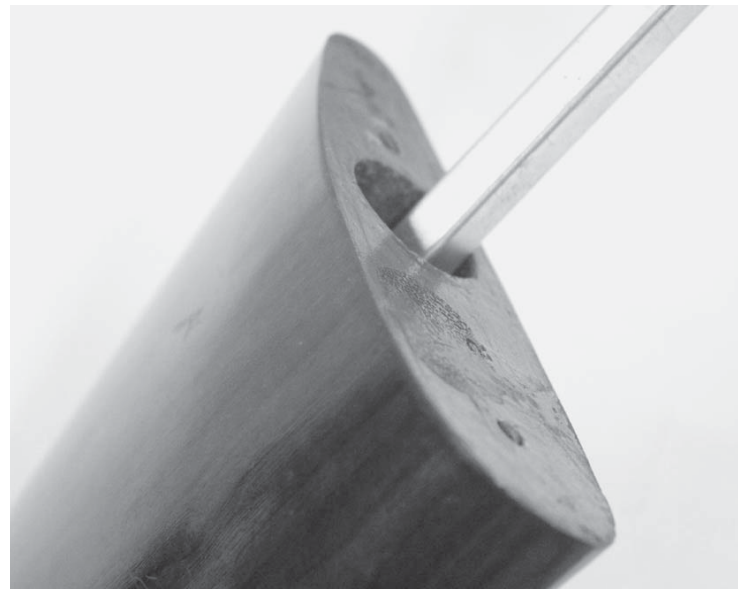
- 8.** The bolt head can now be pulled forward and out of the bolt body.



- 9.** The spring extractor can be removed by prying it out with a small screwdriver, but should not be removed unless it needs to be replaced. Older models may have a rivet retaining the extractor.



- 10.** The ejector and spring can be removed by driving out this pin.



- 11.** To expose the stock bolt, remove the buttplate. Two screws retain the plate to the butt stock. Remove the stock bolt and then the buttstock. There is a lock washer beneath the bolt head and a stock plate between the stock and the receiver.

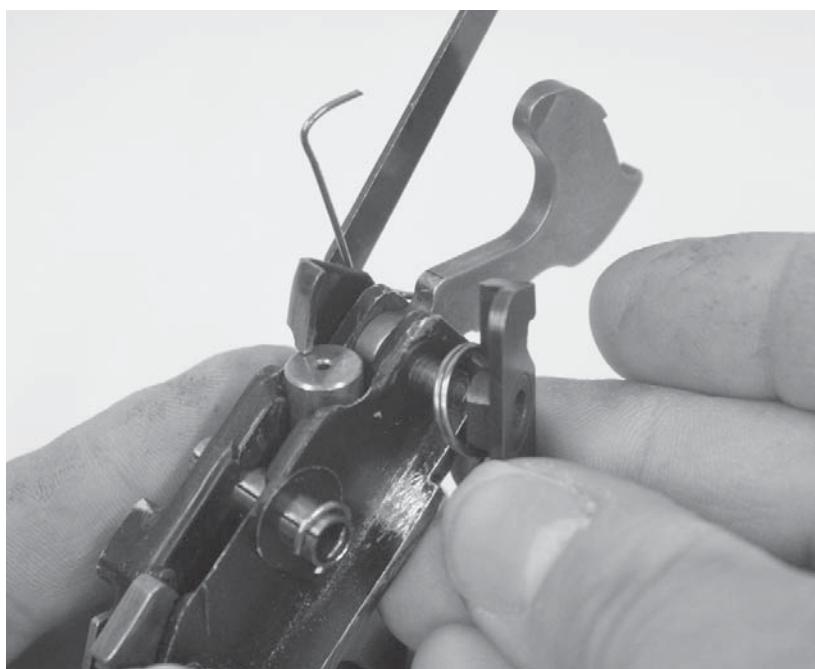
12. Drive out the two trigger housing pins and pull the housing out to the bottom of the receiver.



13. Remove the trigger spring.



14. Dislodge the slide lock spring from the front pin bushing.

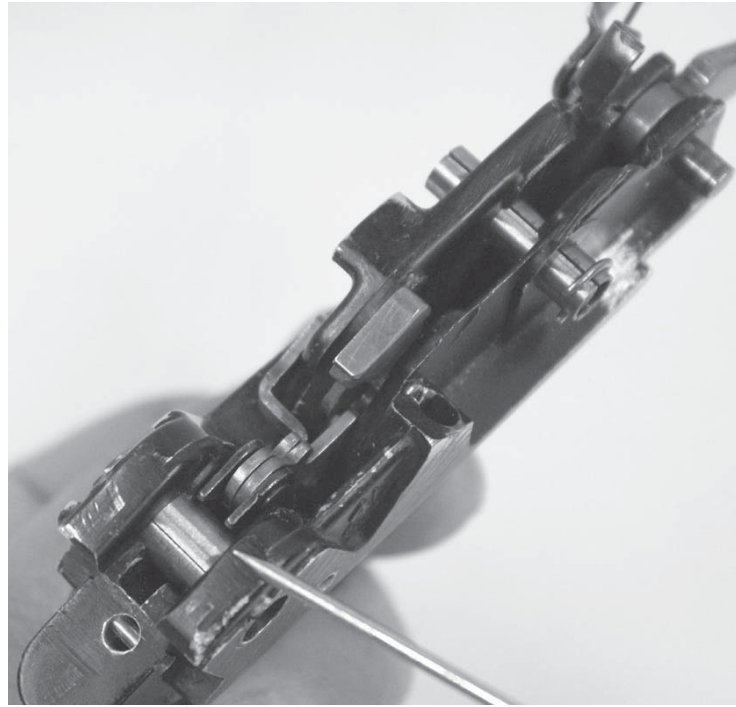


15. Remove the magazine catch and spring by pulling it straight off to the right of the housing. The spring is rather strong, so contain it as it is removed.

- 16.** Push the slide lock slightly to the left to remove its catch from the hammer spring plunger. Then remove the plunger and spring.



- 17.** Push out and remove the two bushings.



- 18.** Push out the trigger pin from right to left. The left end of the pin is splined.



- 19.** Remove the trigger by pushing it up and out of the housing. The connector arm will need to clear the arm of the slide lock.

20. Pull out the hammer pin. This frees the hammer and the slide lock and its spring.



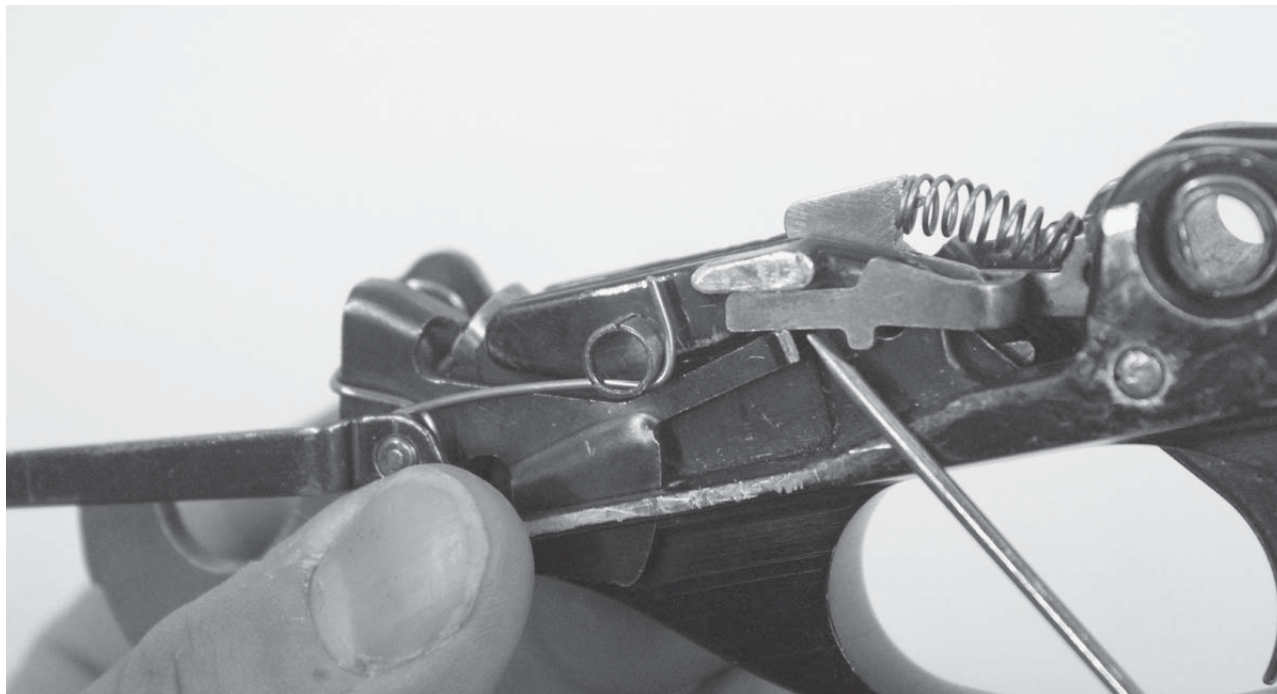
21. Push out this pin to free the sear.



22. Push out this pin to free the safety spring and plunger. Once the spring and plunger are removed, the safety button can be pushed out in either direction.

Reassembly Tips:

1. Be sure the connector is between the trigger housing nub and slide lock arm



2. It is easiest to reinstall the barrel and slide assembly by putting it all together like this. Hold the dust cover to the bolt as the entire grand assembly is inserted into the receiver.

Remington Rolling Block

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Remington Rolling Block also apply to the following guns:

Navy Arms Rolling Block

Navy Arms Rolling Block Buffalo Rifle

Navy Arms Rolling Block Buffalo Carbine

Navy Arms Rolling Block Baby Carbine

Remington No. 2

Navy Arms Rolling Block Creedmoor Target

Remington No. 3

Remington No. 4

Remington No. 5

Uberti Rolling Block Baby Carbine

Star Rolling Block Carbine

Data: Remington Rolling Block

Origin: United States

Manufacturer: Remington Arms Company,
Ilion, New York,
Springfield Armory,
and armories in several
foreign countries

Cartridges: 50 U.S., 45 Danish
Remington, 43 Spanish,
7x57, many others

Overall length: 46 inches
(carbine, 35-5/8 inches)

Barrel length: 30 inches
(carbine, 20-1/2 inches)

Weight: 8-1/2 pounds
(carbine, 7 pounds)

Note: Weights and measurements are for the
7mm model of 1897 -1902, used mainly in
Central and South America

In 1866, Joseph Rider redesigned the Remington-Geiger action, and the rolling block was born. In the years between 1870 and 1900, this gun became the official military arm of a large number of countries, and was also used by the U.S. Navy. Its ingenious “rolling” breechblock made the action a very strong one, and its simplicity made it ideal for military use. the era of the bolt-action repeater ended its military career, but Remington made it as a sporting rifle up to 1933. In more recent times, European-made reproductions of the rolling block have been offered by several importers. All are mechanically the same as the originals.



Disassembly:

1. Back out the vertical screw at the rear of the upper tang, and remove the buttstock toward the rear. If the stock is very tight, bump the front of the comb with the heel of the hand to start it.



2. If the gun is equipped with a saddle ring, back out the ring bar screw, and swing the bar upward. Remove the ring. The bar is threaded into the side of the receiver, and is not removed at this time.

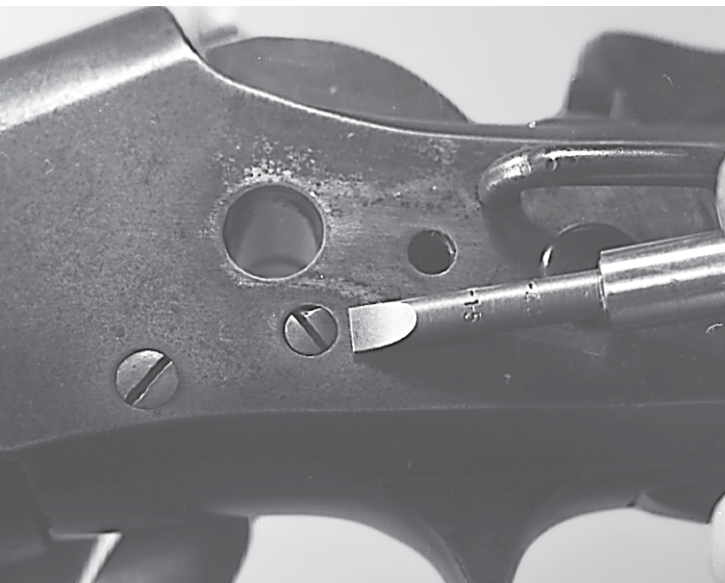


3. Remove the screw at the center of the lock plate, located between the two large pins on the left side of the receiver (**Note:** Remington called the lock plate the "button"). Take off the lock plate toward the left.

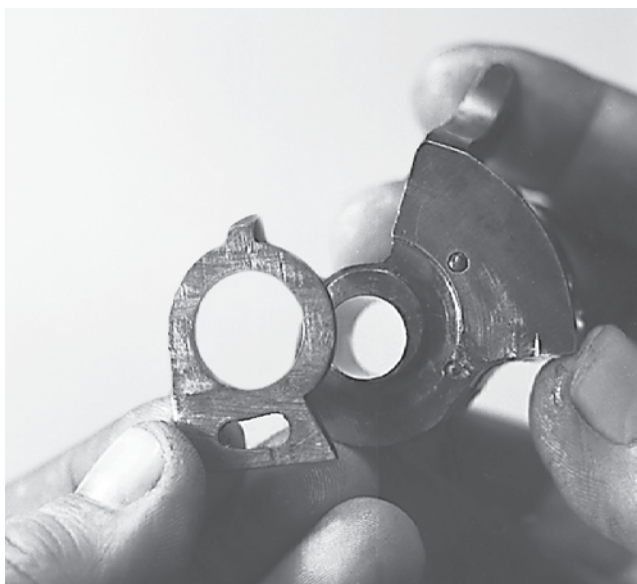


4. Cock the hammer, and push out the breechblock pivot pin toward the left. If the pin is tight, use a non-marring nylon or brass drift punch to start it.

- 5.** Remove the small screw on the left side of the receiver, just below the breechblock pivot hole.



- 6.** Remove the breechblock assembly, including the ejector, upward and toward the rear.



- 7.** The ejector is easily detached from the left side of the breechblock.



- 8.** Drifting out the lower cross pin in the breechblock will allow the firing pin retractor to be taken out downward, and removal of the upper cross pin will free the firing pin, which is taken out toward the rear.

- 9.** Restrain the hammer, pull the trigger, and ease the hammer down beyond its normal full forward position. Push out the hammer pivot toward the left.



- 10.** Remove the hammer upward.



- 11.** If the gun has a saddle ring bar, it can now be unscrewed from the left side of the receiver and taken off. When unscrewing it, lift its free end slightly during the first few turns, to avoid marring the receiver.



- 12.** Remove the cross screw at the lower front of the receiver.

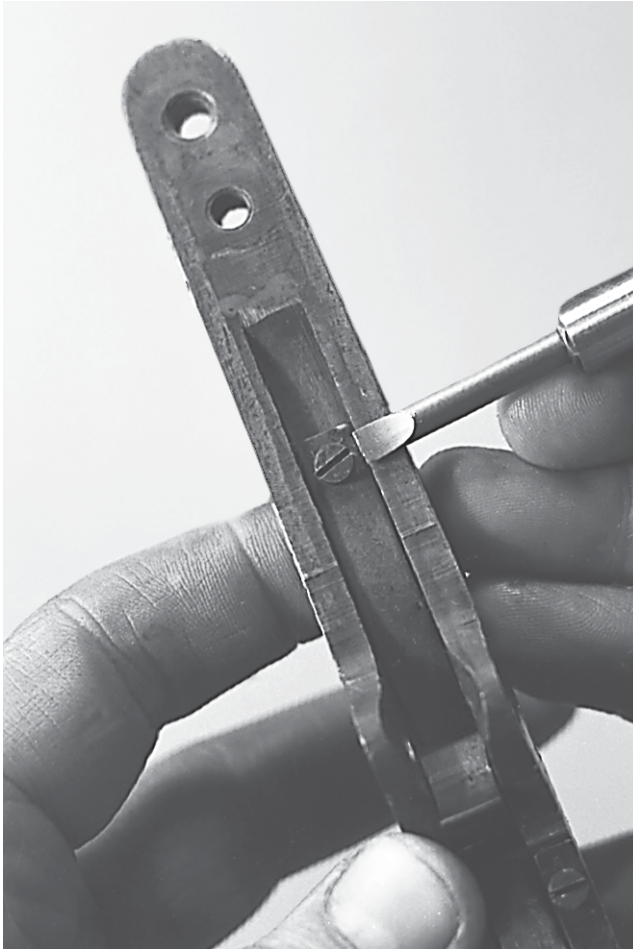
- 13.** Remove the cross screw at the lower rear of the receiver.



- 14.** Remove the trigger guard assembly downward and toward the rear.

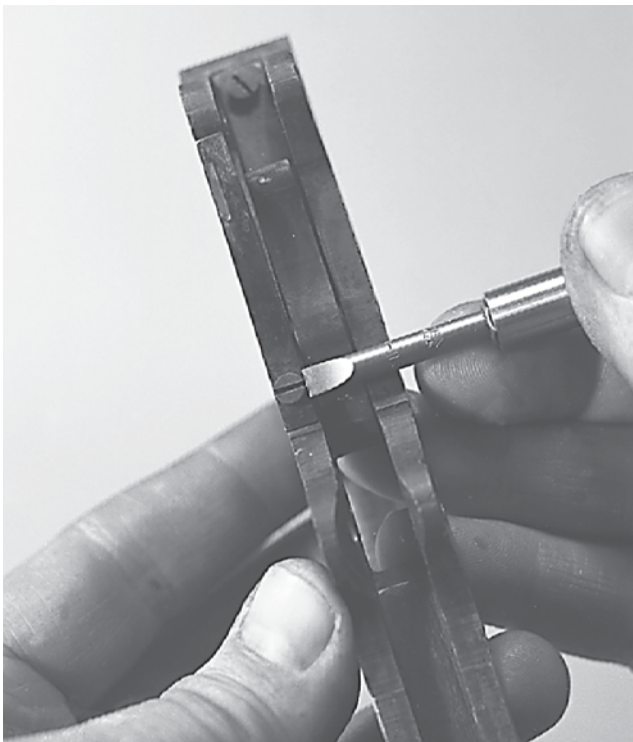


- 15.** Remove the hammer spring screw, and take off the hammer spring upward.

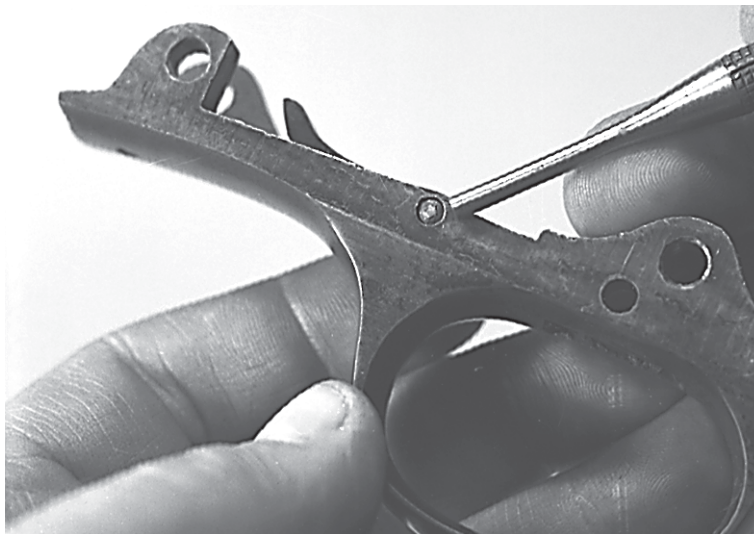


16. Remove the trigger spring screw, and take out the trigger spring upward.

17. Drift out the trigger cross pin, and remove the trigger upward.

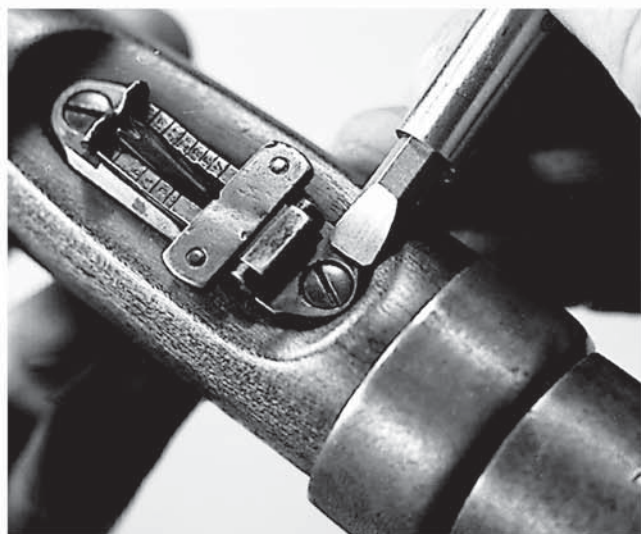


18. Remove the ejector spring screw, and take off the ejector spring upward.



19. Drift out the cross pin at the front of the guard, and remove the breechblock locking lever upward. **Caution:** The pin is very near the upper edge of the guard frame, so take care that the edge is not broken during removal.

- 20.** Remove the vertical screw at the front of the guard unit, and take out the locking lever spring upward.



- 22.** Before the upper handguard wood can be removed, the rear sight must be taken off by backing out its two screws, at the front and rear of the sight base.

- 21.** If the gun is a full-length rifle, there will be three barrel bands to be removed. On the carbine, as shown, remove the single band by depressing its spring latch and sliding it off toward the front. The forend wood can now be taken off downward.



Reassembly Tips:

1. After the hammer is installed on its pivot in the receiver, insert a tool from the rear to depress the front of the hammer spring, to insure that the tip of the spring engages the spring lobe on the rear of the hammer.



2. When replacing the breechblock assembly in the receiver, you must exert downward pressure on the assembly while inserting the pivot pin, to slightly compress the lock lever and the ejector spring.





Rossi Circuit Judge

Data: Rossi Circuit Judge

Origin: Brazil

Manufacturer: Taurus, Brazil

Cartridge: .45 Colt/.410 shotgun

Cylinder Capacity: 5 rounds

Overall Length: 41 inches

Barrel Length: 18.5 inches

Weight: 5.3 pounds

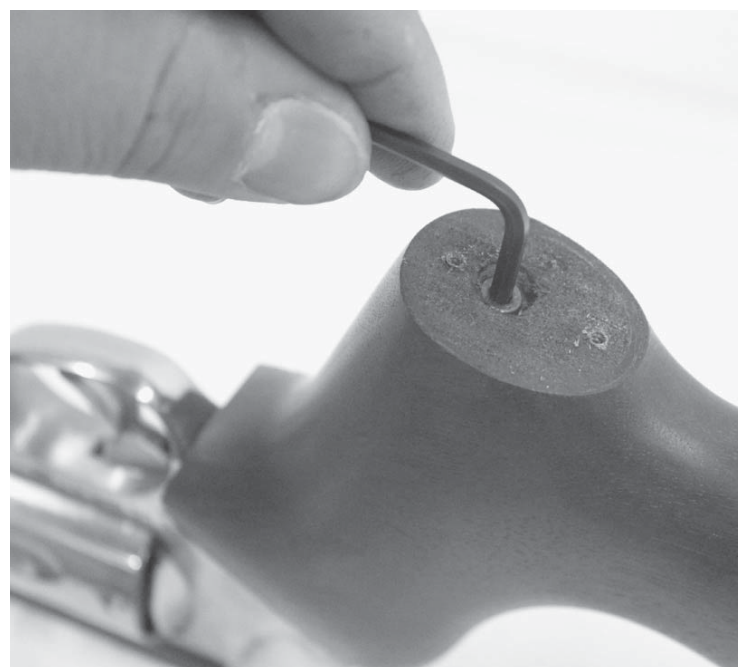
The Circuit Judge is simply a long gun version of Taurus' Judge revolver. Like the handgun, it can fire both .45 Colt and .410 shotgun shells. Several different models in different finishes exist, and the takedown steps are essentially the same.

Disassembly:

1. Remove both screws in the fore-end of the rifle. The forward screw will usually be tipped with a sling swivel. Then lift the fore-end from the underside of the barrel.



2. Remove the grip cap.

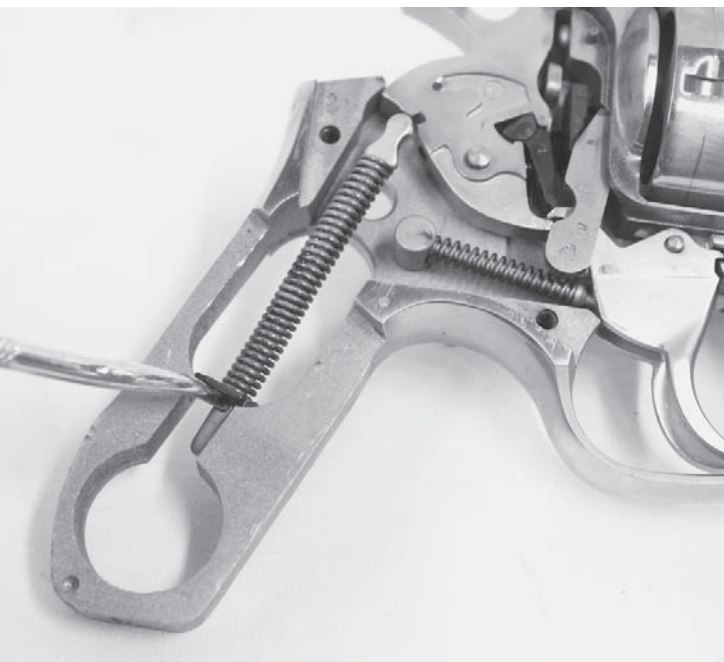


3. Unscrew the buttstock bolt from inside the pistol grip and then remove the buttstock from the frame.

- 4.** Remove the three rearmost frame screws. These retain the right sideplate. The most forward of these screws differs from the other two.



- 5.** To remove the sideplate, gently tap the pistol grip area of the frame with a screwdriver handle. This will gently jar the plate loose and it can then be lifted from the frame. Do not attempt to pry the sideplate loose or it and/or the frame will be damaged.

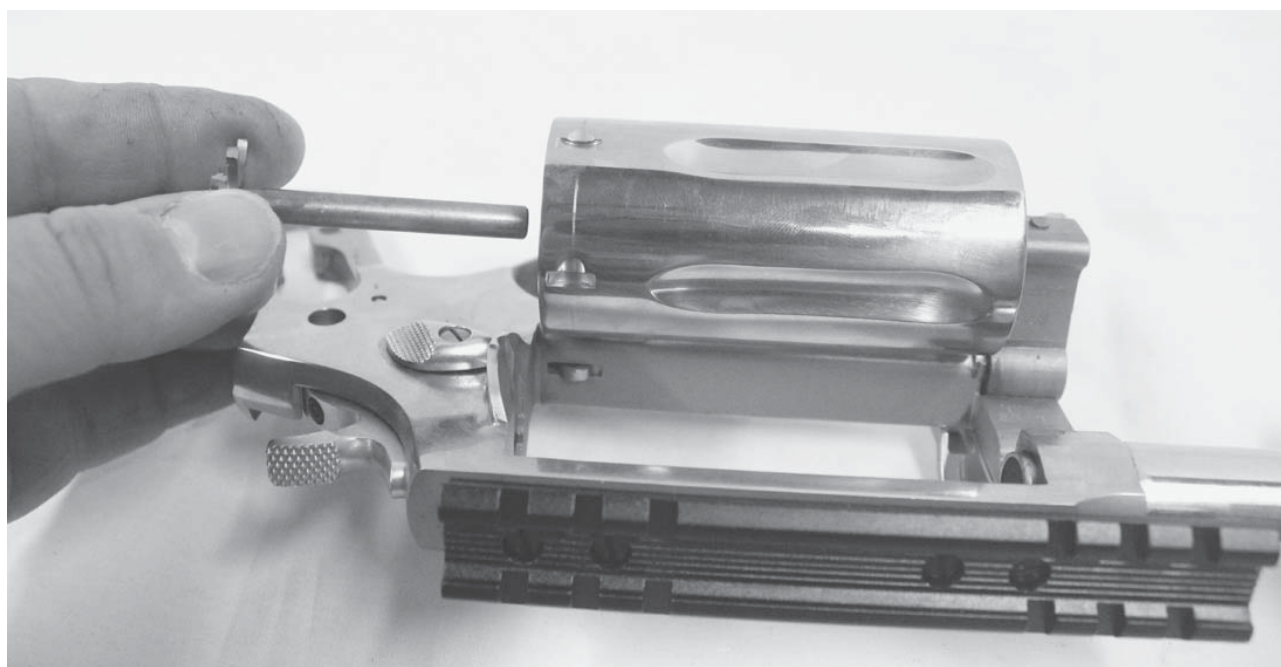
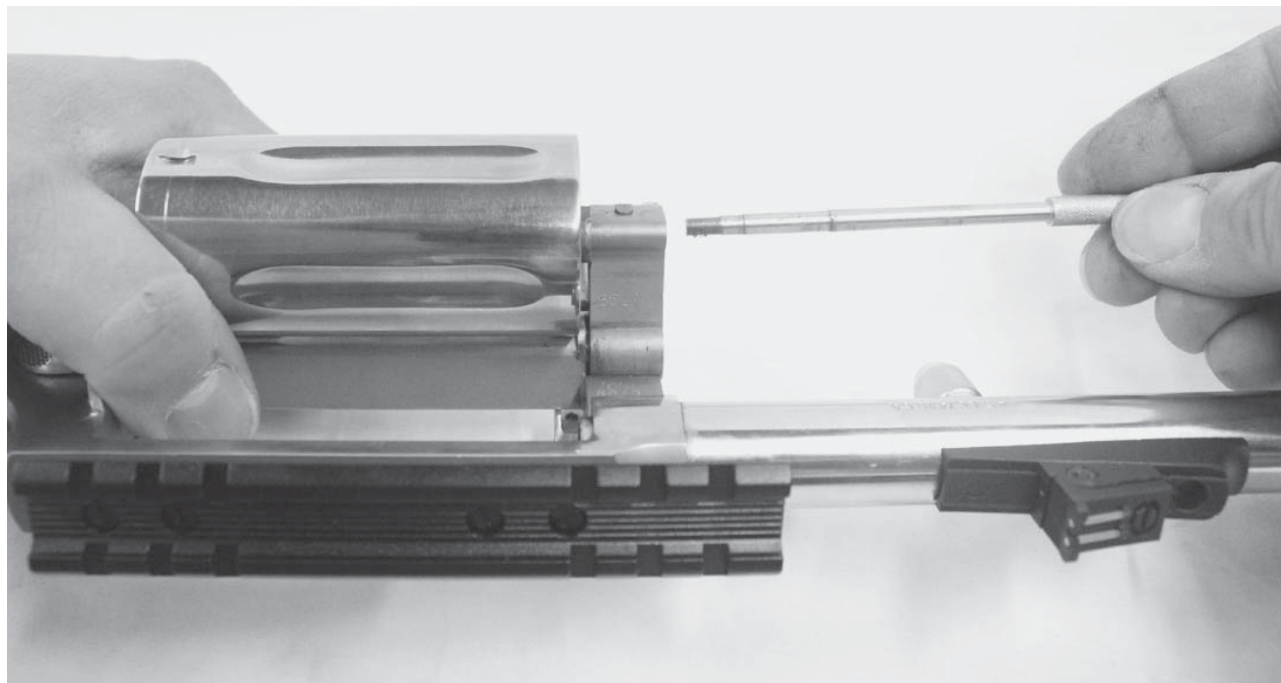


- 6.** Cock the hammer. Then insert something into the hole in the hammer strut. Paper clips or dental picks (seen here) work well for this. Remove the hammer strut, spring, and spring stop.



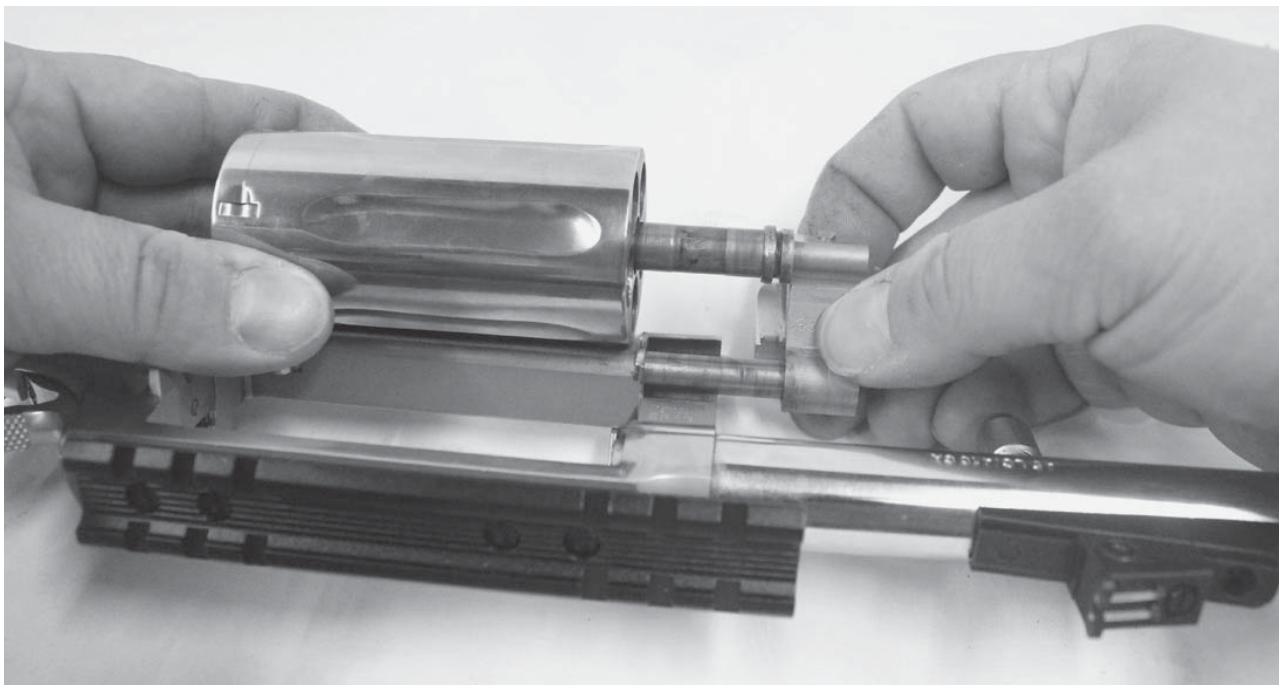
- 7.** Cock the hammer. Then insert something into the hole in the hammer strut. Paper clips or dental picks (seen here) work well for this. Then to remove the hammer strut, spring, and spring stop, release the hammer by pulling the trigger, push the hammer fully forward, and pull the captive spring assembly from the frame.

- 8.** Open the cylinder fully. Unscrew the ejector rod and remove it from the cylinder. This rod uses left-handed threads.



- 9.** Pull the extractor from the rear of the cylinder. Inside the extractor is the lock pin and lock pin spring. They will fall out.

- 10.** While holding the cylinder and frame, pull the cylinder crane forward and out.

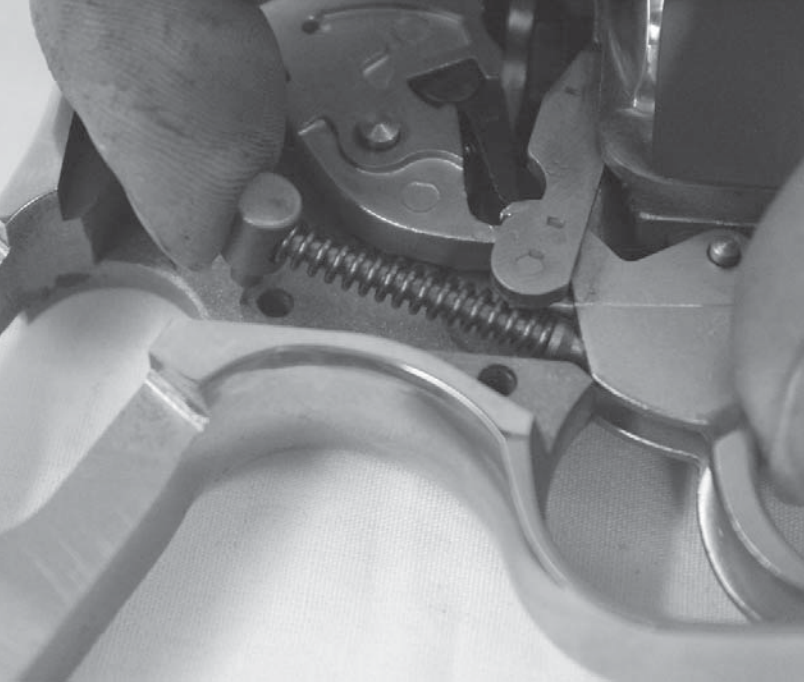


- 11.** The crane assembly, seen here, is composed of the crane itself, the long slender cylinder stop and spring, extractor spring and seat, and a spacer bushing.

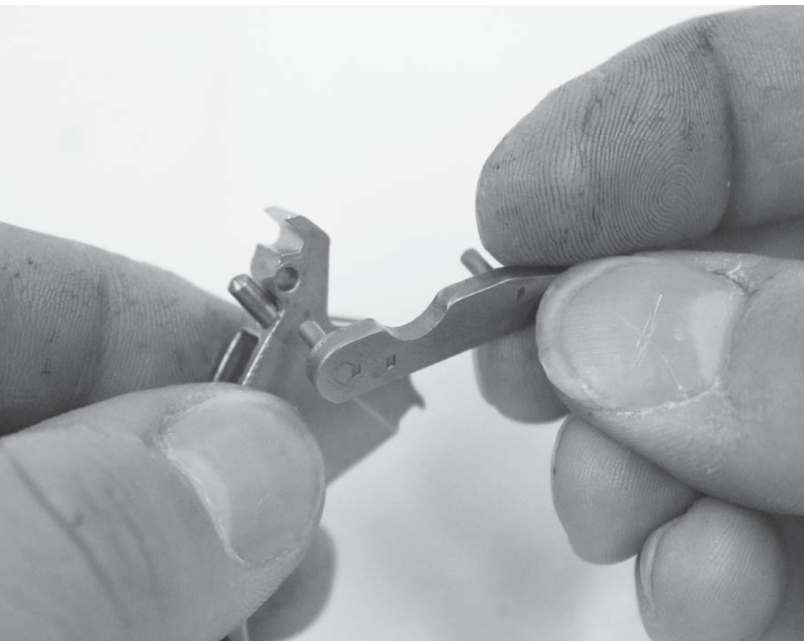


- 12.** Both gas deflectors, one on the right side of the frame and one on the crane, can be removed by the removal of two screws.

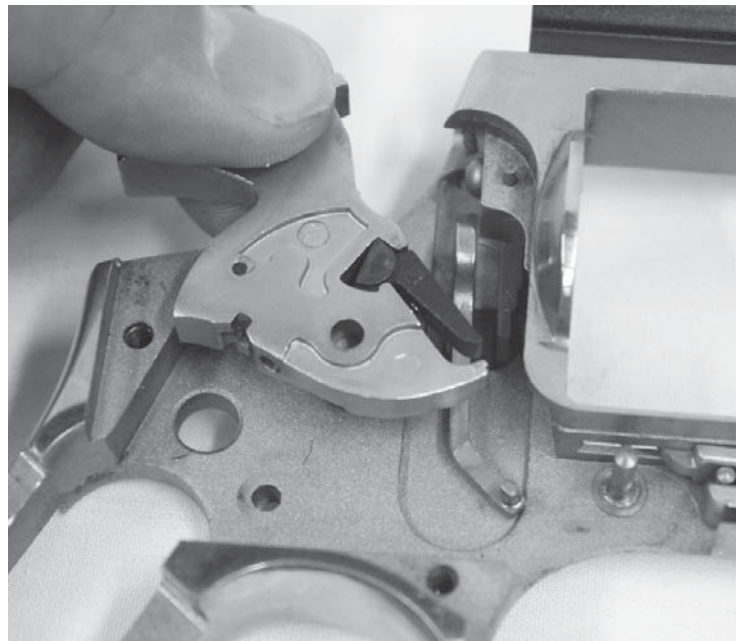
- 13.** The trigger spring, plunger, and seat can be removed by slightly pinching it into the trigger and then lifting the seat out of its hole in the frame.



- 14.** Remove the trigger by pulling the hand back to clear the frame and lifting the entire trigger assembly up and out of the frame.



- 15.** Take the hand out of the trigger. Do this carefully, as the hand spring and detent may fly forth.

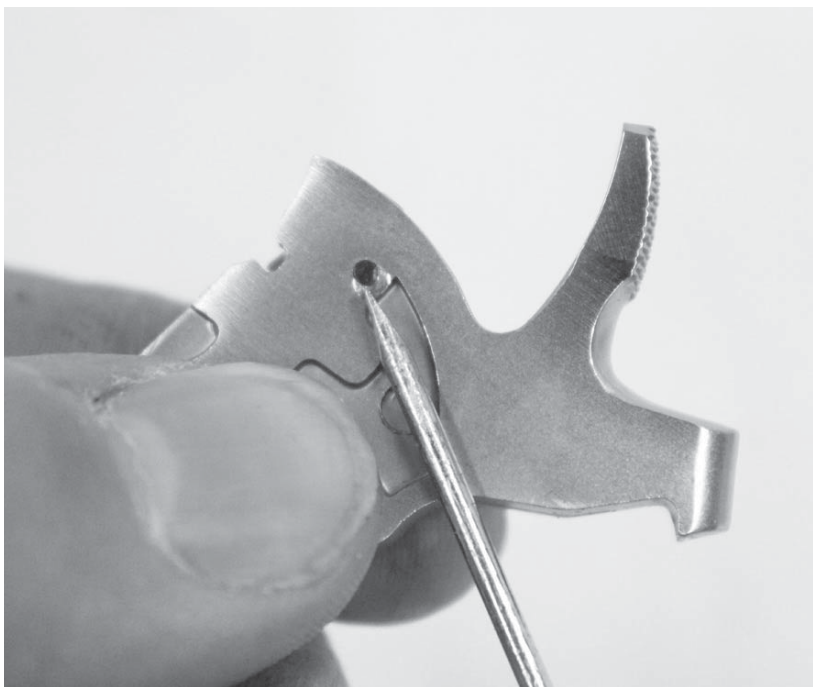


- 16.** Pull the hammer slightly to the rear to clear the frame and lift it from the frame. The transfer bar beneath it can then also be removed.

- 17.** The double-action sear can be slid out of the hammer to the right. Take care not to damage its fragile spring if you do so.



- 18.** The keyed manual locking device in the hammer can be removed by driving out this heavily staked pin.

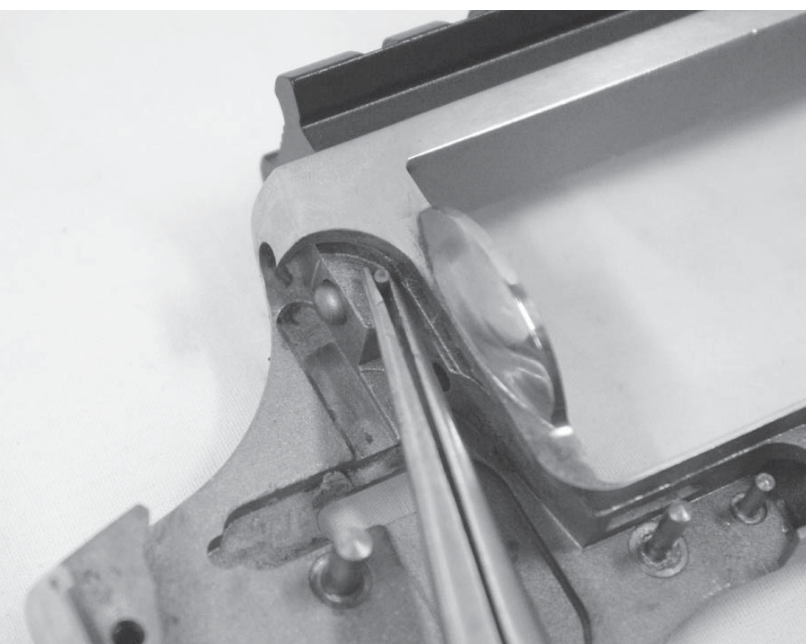
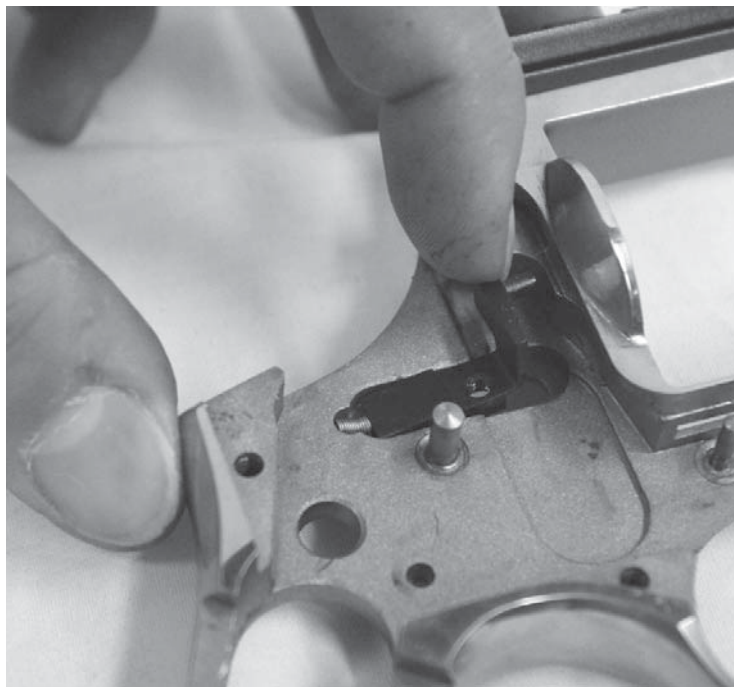


- 19.** Push the cylinder stop fully to the rear so that the stop will drop below the lower frame's ceiling. It can then be lifted from the frame

- 20.** Remove the thumb piece from the frame by removing this screw.



- 21.** Pull the cylinder bolt to the rear until it stops, then lift the front from the frame to remove it.



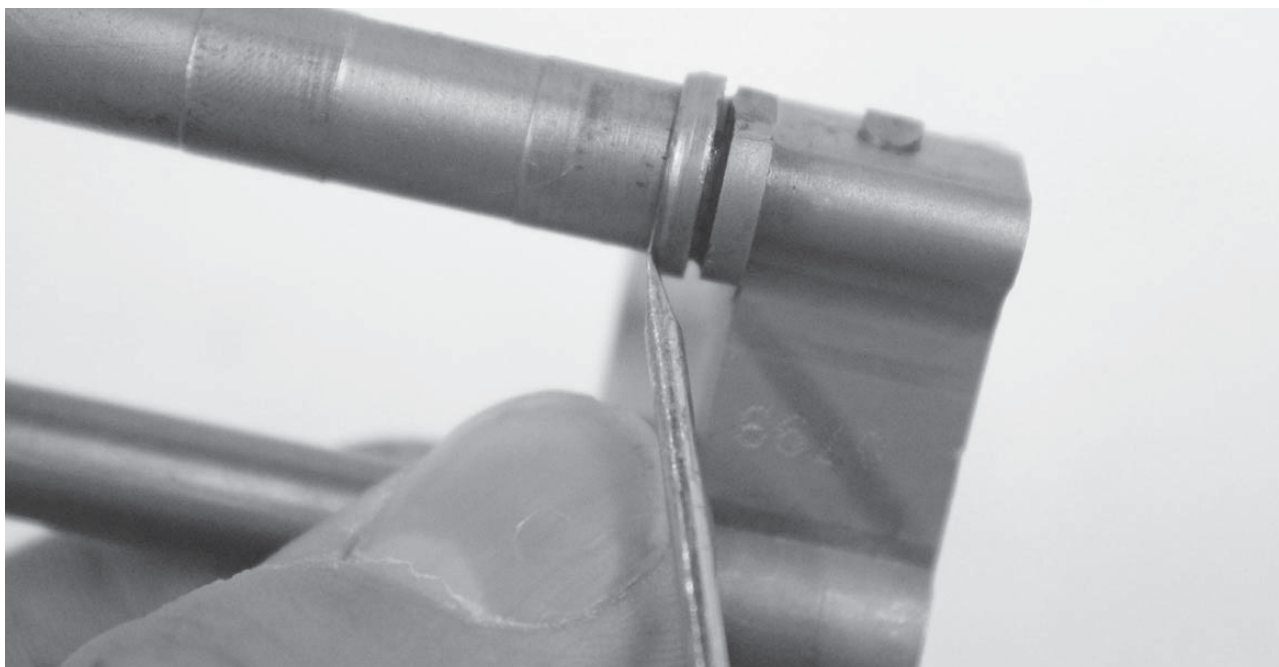
- 22.** The firing pin and spring can be removed by pulling this small pin up and out of the frame.



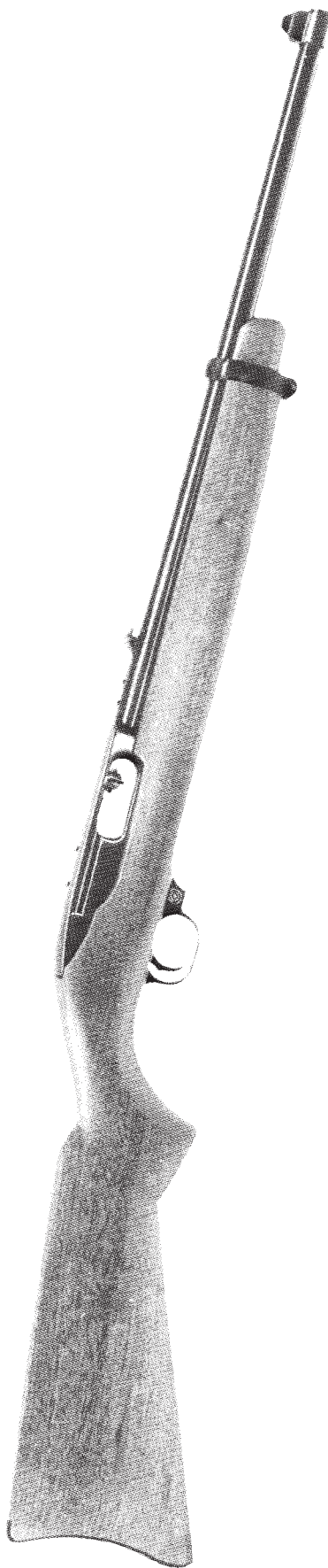
- 23.** The front and rear sight are both retained by two screws and can be easily removed.

Reassembly Tips:

1. The spacer bushing in the cylinder assembly has a bevel that should face to the rear.



2. There is no good way to illustrate this. When reinstalling the trigger, hand, hammer, and transfer bar, it should be done in this order. First, lay the transfer bar down in the frame. Then install the hammer in the fully forward position. The hand can then be installed in the trigger and held slightly back. The trigger should then be dropped in so that the pin on the transfer bar enters its hole in the trigger as the hole in the trigger is being dropped onto the trigger pin in the frame. When this snaps into place, the hand can then be allowed to move forward into its slot beside the hammer. The tail of the trigger should be positioned beneath the black double-action sear and above the toe of the hammer (single-action sear).



Ruger 44 Carbine

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Ruger 44 Carbine also apply to the following guns:

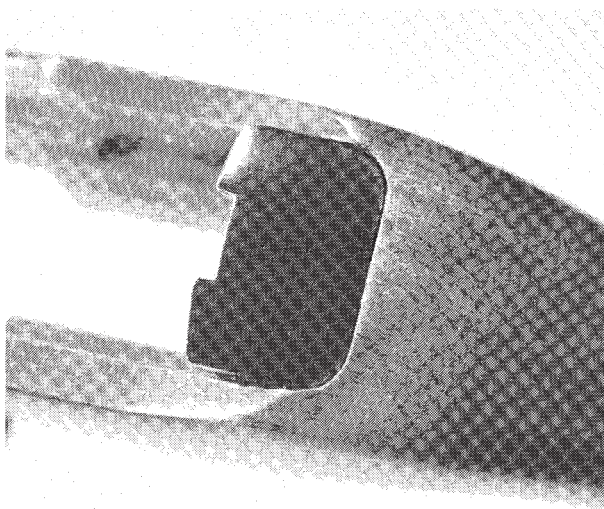
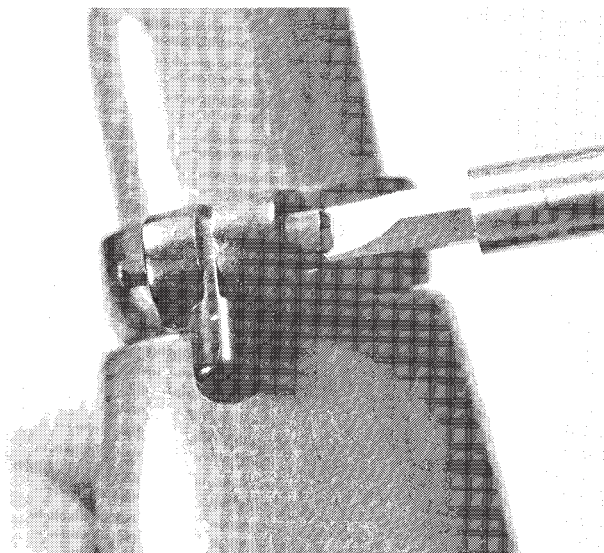
Ruger 44RS Carbine **Ruger 44 Sporter Deluxe Carbine**
Ruger 44 International Carbine

Data:	Ruger 44 Carbine
Origin:	United States
Manufacturer:	Sturm, Ruger & Company Southport, Connecticut
Cartridge:	44 Magnum
Magazine capacity:	4 rounds
Overall length:	36 inches
Barrel length:	18-1/2 inches
Weight:	5-3/4 pounds

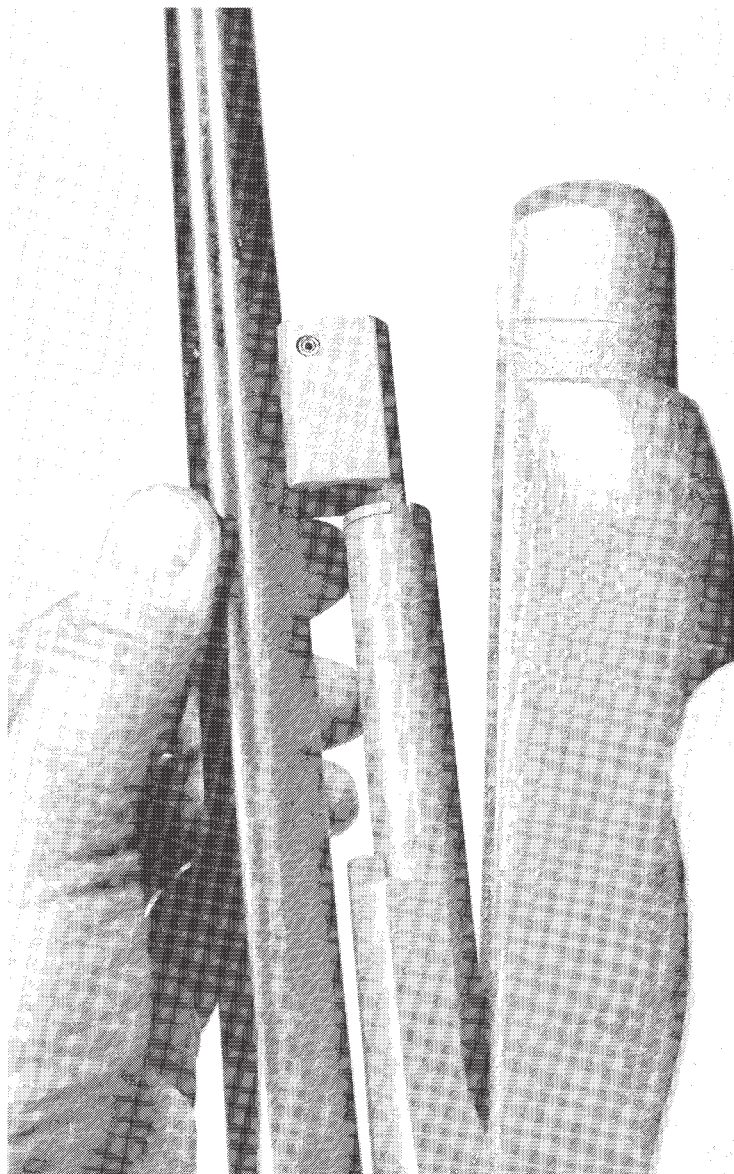
When the Ruger 44 Autoloading Carbine arrived in 1961, it was the first rifle chambered for this round. It gained much popularity as a close-range gun for medium game, and the ballistics of its cartridge are comparable to the old 30-30. Like all of Bill Ruger's creations, it is an engineering masterpiece. It is not unnecessarily complicated, but an inter-dependency of certain parts makes takedown and reassembly an endeavor best left to the professional. The 44 Carbine was discontinued in 1985.

Disassembly:

1. Pull back the operating handle to lock the bolt open. Remove the cross screw at the bottom of the barrel band, and take off the band toward the front.

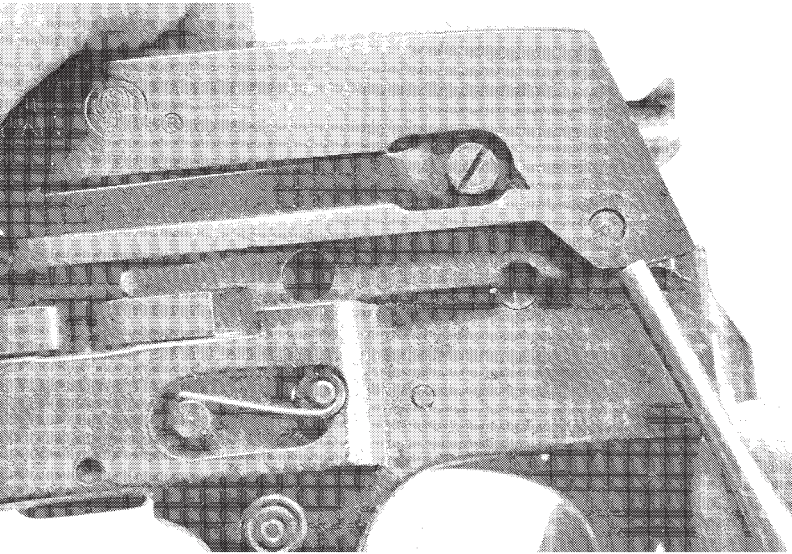


2. Lift the action at the front, and disengage its rear hook from the recoil block in the stock. Take out the action upward and toward the front.

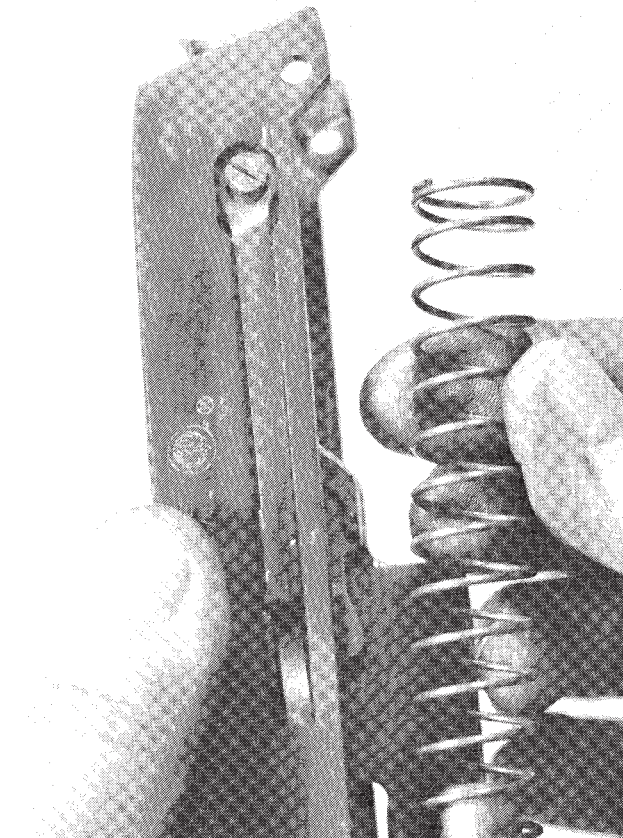


3. If necessary, the recoil block can be removed by taking off the buttplate and backing out the through-bolt, which enters the block from the rear. The block is then removed forward and upward.

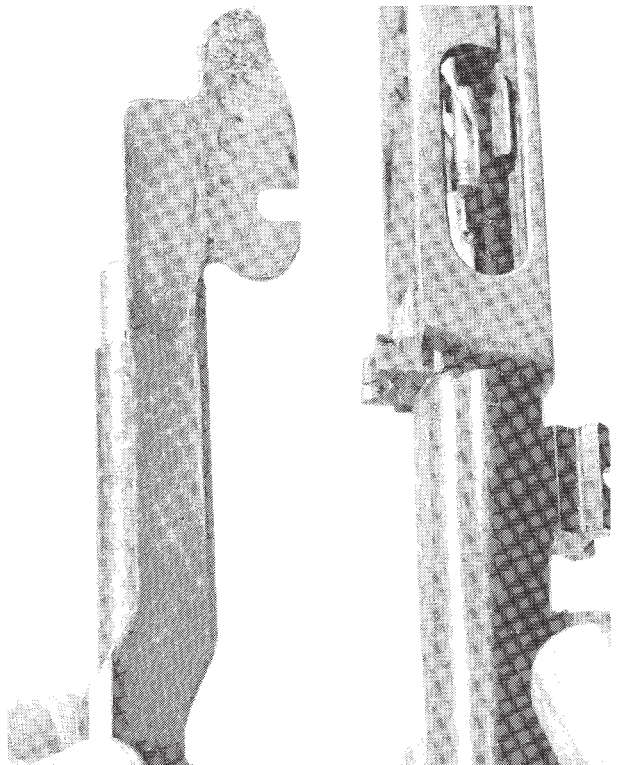
- 4.** Push the lifter latch, and ease the bolt to closed position. Drift out the cross pin at the rear of the receiver.



- 5.** Move the trigger housing toward the rear, and take it off downward.

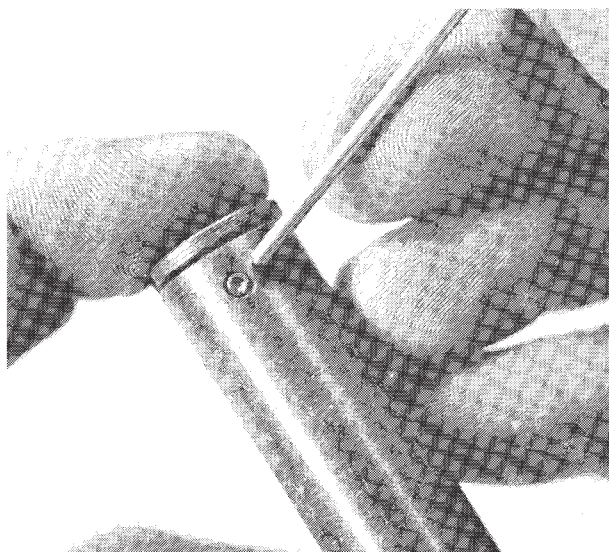


- 6.** With the gun inverted, grip the rear of the recoil spring firmly, and lift the action slide away from the bottom of the receiver. As soon as the rear end of the spring has cleared the edge of the receiver, slowly release the spring and remove it toward the rear.

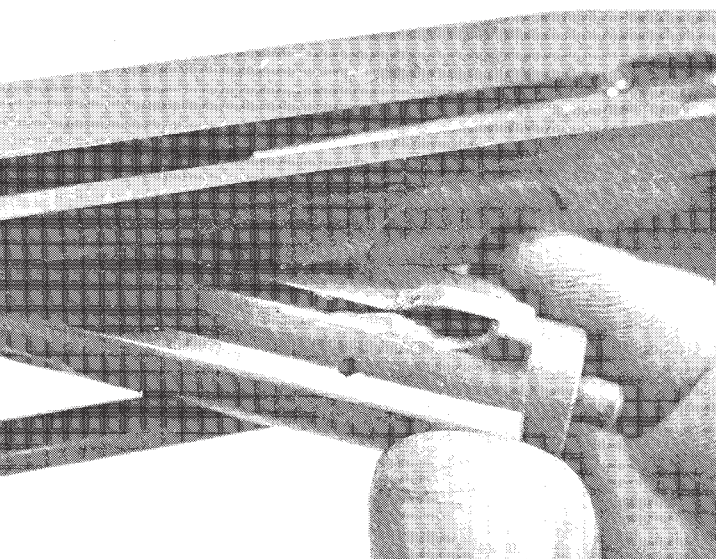
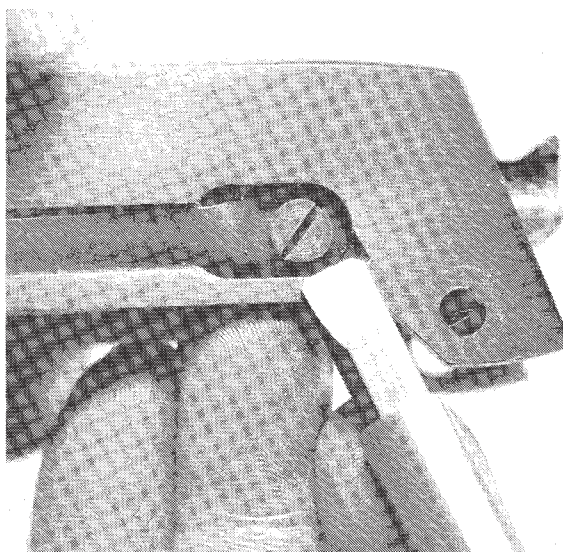


- 7.** Remove the bolt handle from its slot in the action slide, and take it off toward the right.
- 8.** Remove the action slide and magazine tube together from the bottom of the receiver. Separate the magazine tube from the action slide.

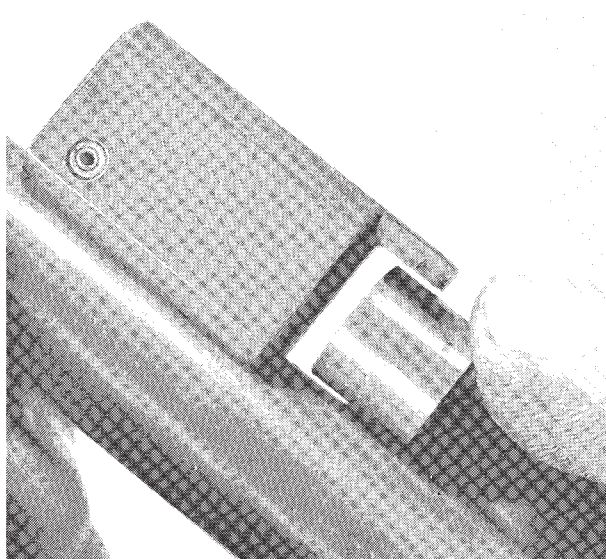
- 9.** Drifting out the roll pin at the front of the magazine tube will allow removal of the tube end piece, magazine spring, and follower. **Caution:** *The spring is under tension, so control the end piece and ease it out.*



- 10.** Remove the screw at the left rear of the receiver, and take off the ejector toward the left.

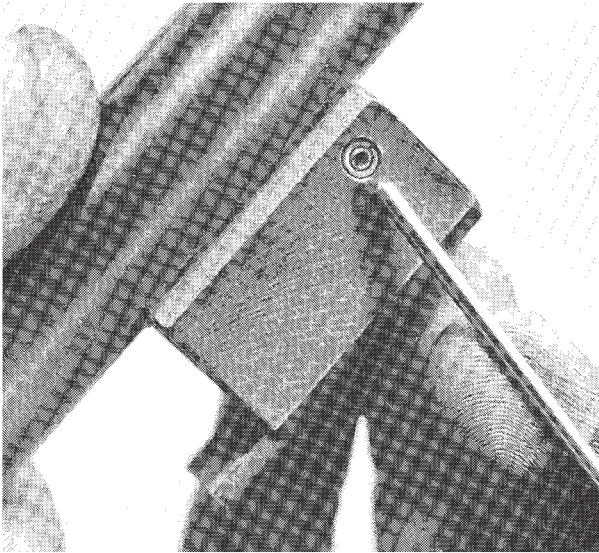


- 11.** Insert a finger through the ejection port to turn the bolt and free its locking lugs, then move it toward the rear about half-way. Lift the bolt out of the underside of the receiver.

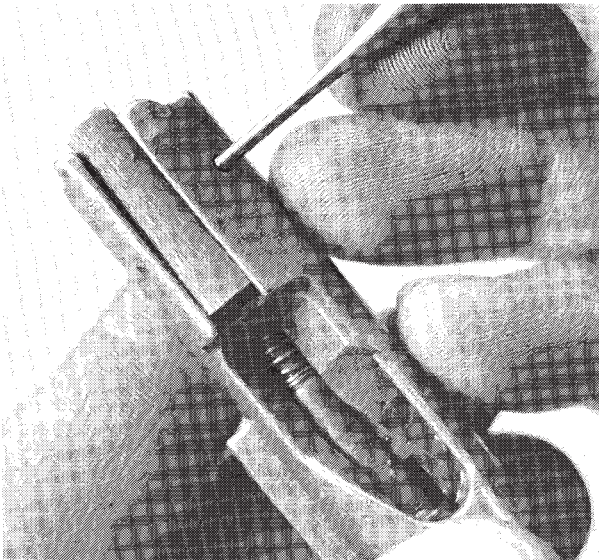
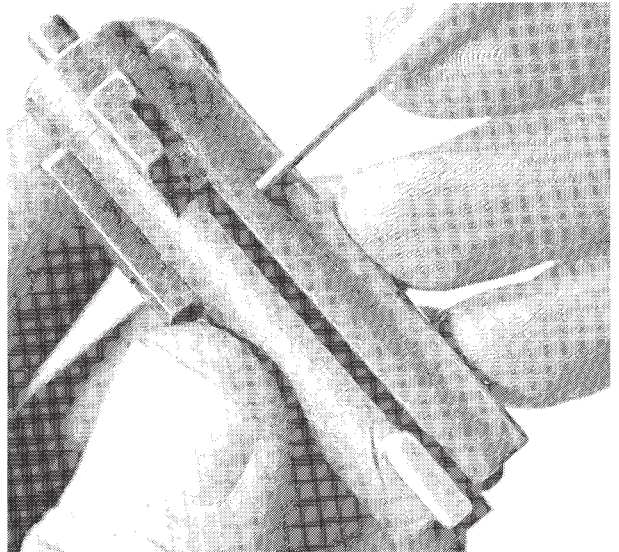


- 12.** The gas piston is usually easy to remove from the rear of the gas cylinder. If it is tight because of powder residue, tap the rear flange of the cylinder with a plastic hammer to nudge it out.

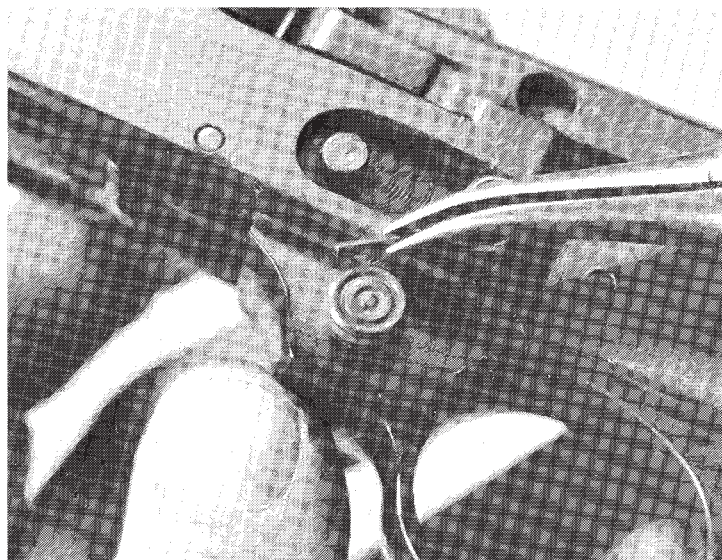
- 13.** The piston block plug at the front of the gas cylinder is retained by two concentric roll pins, and is removed toward the front. In normal takedown, it is best left in place.



- 14.** The firing pin is retained in the bolt by a pin at the rear, and the firing pin and its return spring are taken out toward the rear.

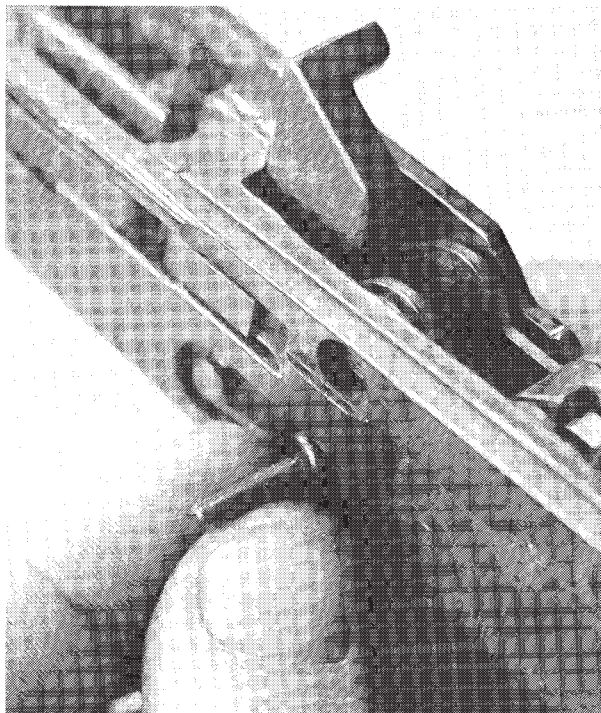


- 15.** The extractor is retained by a vertical pin at the front of the bolt, and this pin must be driven out upward. The extractor and its coil spring are then removed toward the right.

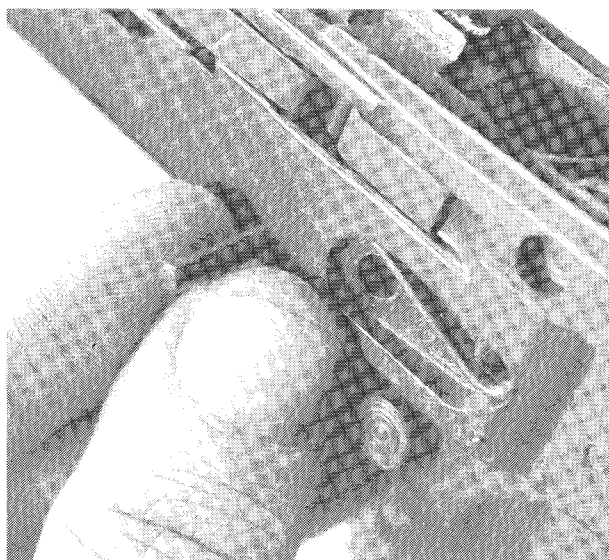


- 16.** Restrain the hammer, pull the trigger, and ease the hammer down to the fired position. Unhook the outer arms of the hammer spring, on each side of the housing, from the grooved ends of the hammer pivot pin, partially relieving the tension of the springs. **Caution:** Use pliers to disengage the springs, as they are under heavy tension.

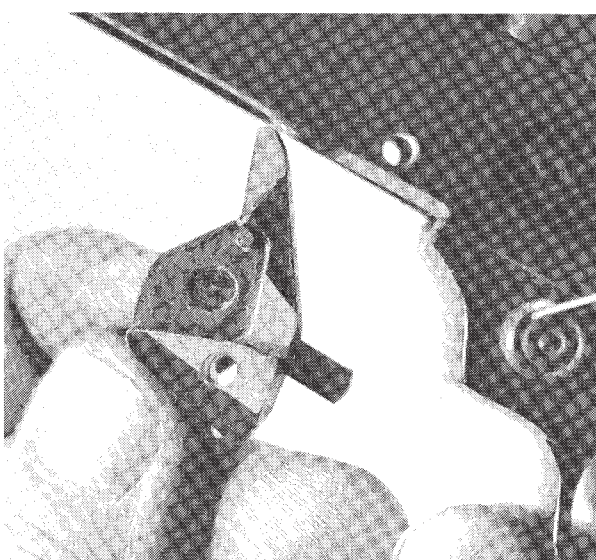
- 17.** When the spring arms are turned downward, the hammer spring pin can be pushed out and removed. After removal of the pin, the springs will be loose, but they are not taken out at this time.



- 18.** Push out the hammer pivot pin toward either side. Remove the hammer upward.

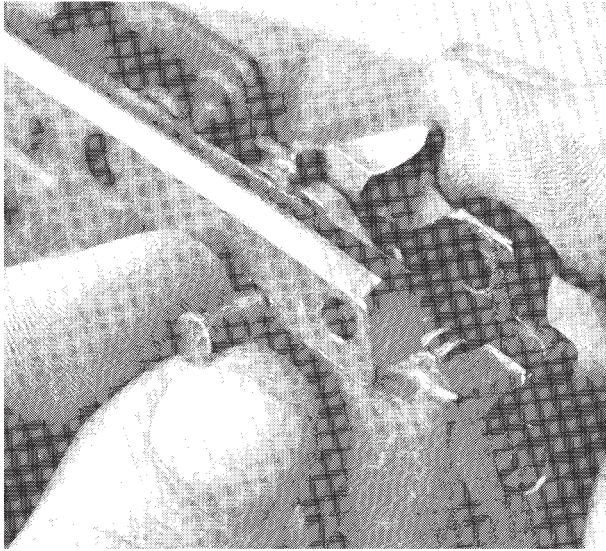


- 19.** Drift out the cross pin that retains the lifter latch.

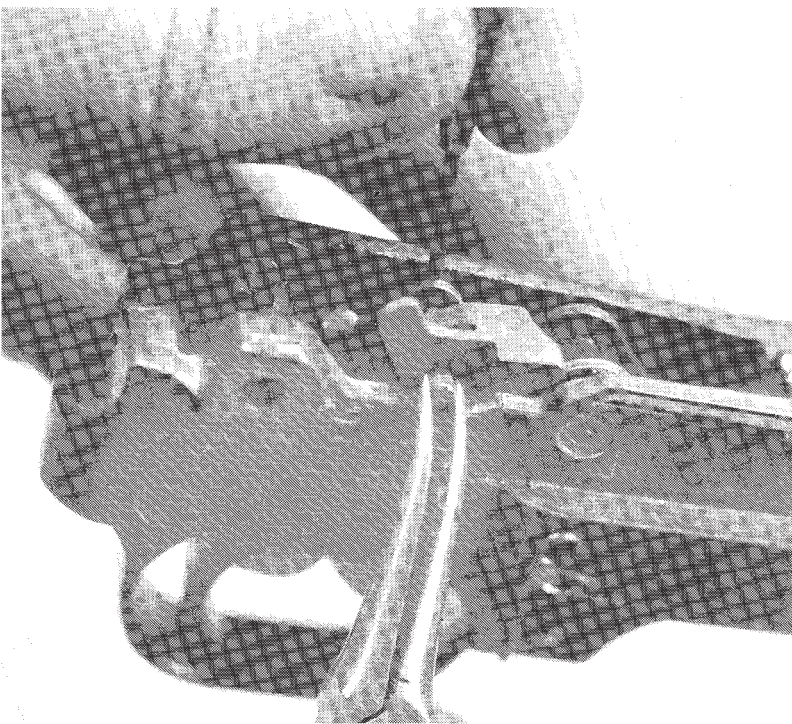
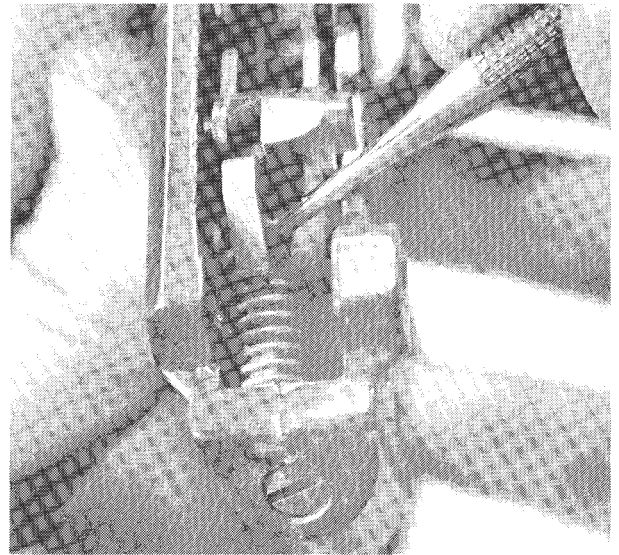


- 20.** Raise the lifter at the front, and take out the lifter latch downward. The plunger and spring are easily detached from the rear of the lifter latch.

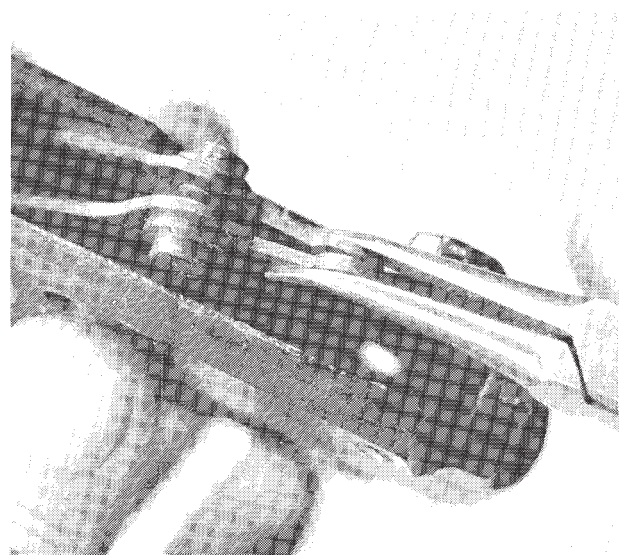
- 21.** Move the front of the lifter back to its lowered position to relieve tension on the cam spring, and push out the lifter cam pin toward the left.



- 22.** Insert an angled drift punch through the lifter cam pinhole, and lever the lifter cam slightly toward the rear. Raise the front of the lifter, and remove the cam and its spring upward and toward the front.



- 23.** Insert a small screwdriver on the left side at the rear tip of the carrier, and push the lifter dog pin out toward the right until it can be grasped with pliers and pulled out. Remove the lifter dog upward.

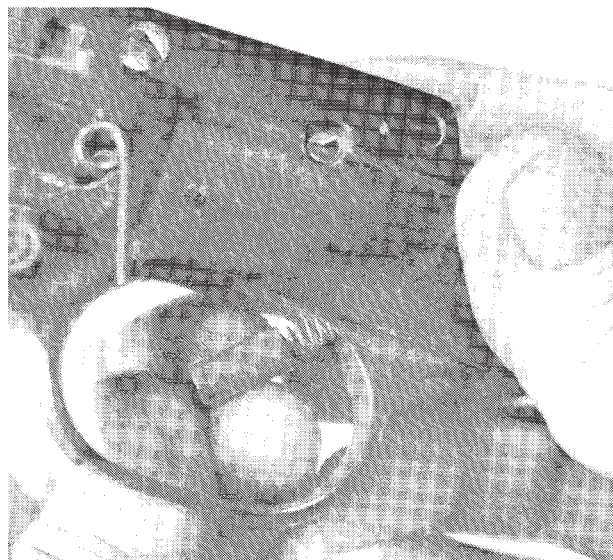
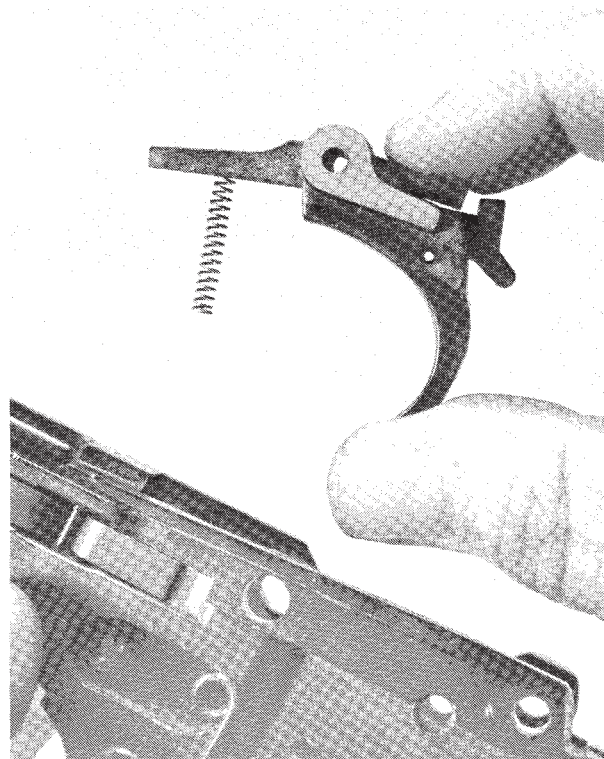


- 24.** Squeeze the rear arms of the carrier (lifter) together, to move the side studs from their holes in the sides of the housing, and remove it upward and toward the rear.

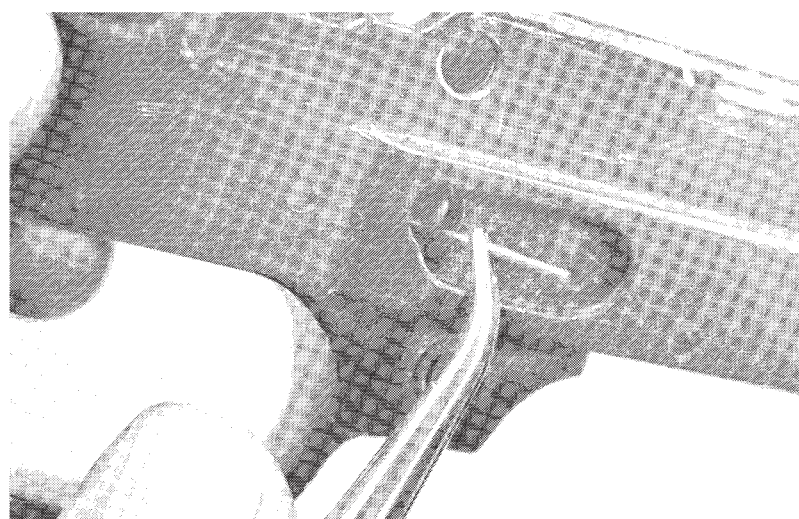
- 25.** Push out the trigger pin, and move the twin hammer springs out to each side to clear the trigger and sear assembly.



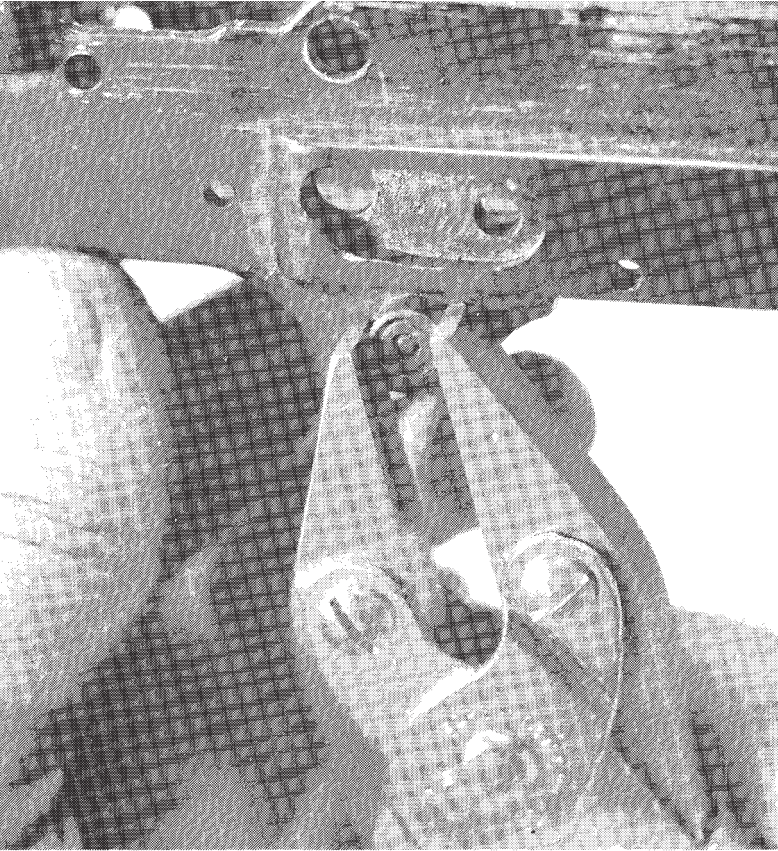
- 26.** Remove the trigger, sear, and disconnecter assembly upward, and remove the sear spring from its well in the housing.



- 27.** Remove the trigger plunger and spring from their hole at the rear of the trigger guard.

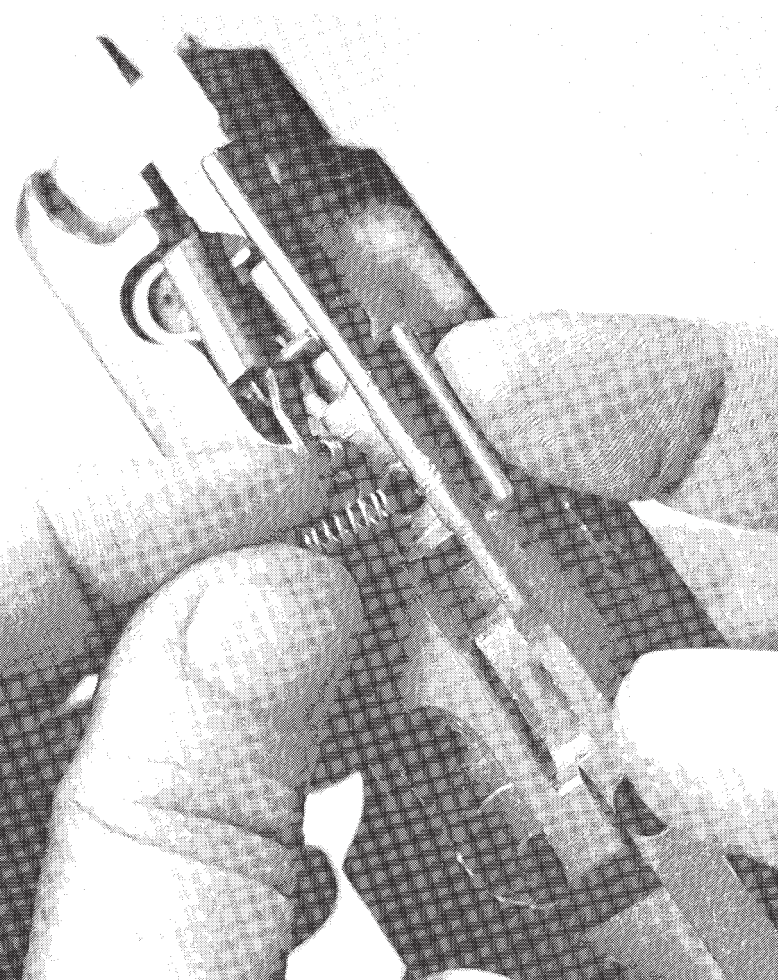
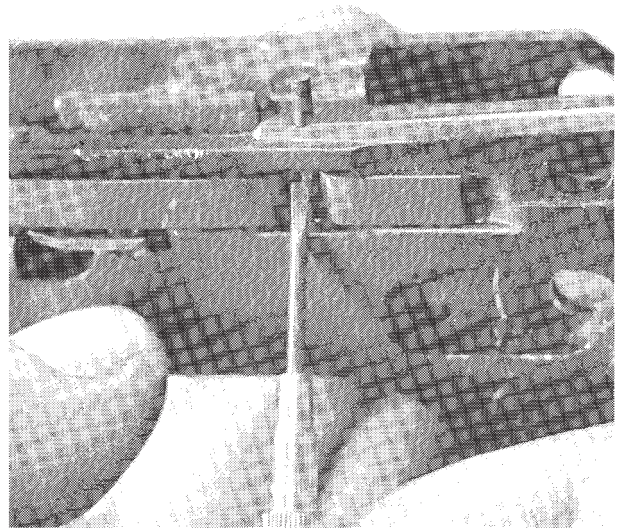


- 28.** Move the hammer springs inward, one at a time, tip the outer arms outward, and push the springs into the interior of the trigger housing for removal.



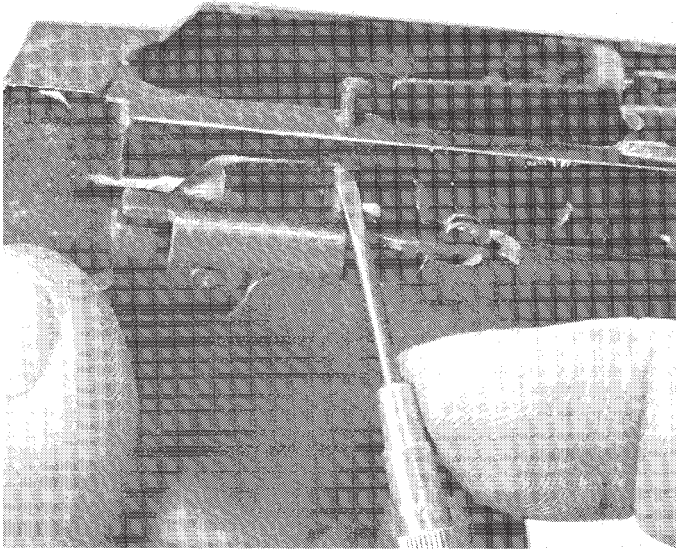
- 29.** Grip the safety with smooth-jawed parallel pliers, and give it one-quarter turn clockwise (right side view). Remove the safety toward the left. **Caution:** *The safety plunger and spring will be released as the safety clears, so insert a screwdriver into the housing to restrain them.*

- 30.** The flat cartridge stop spring is retained on the left side of the trigger housing by a vertical pin, which is in a blind hole. Use a small screwdriver to nudge it upward until it can be grasped with pliers and taken out. The flat spring is then removed toward the left.



- 31.** After the flat spring is removed, take out the rear-most of the two coil springs from its hole in the trigger housing.

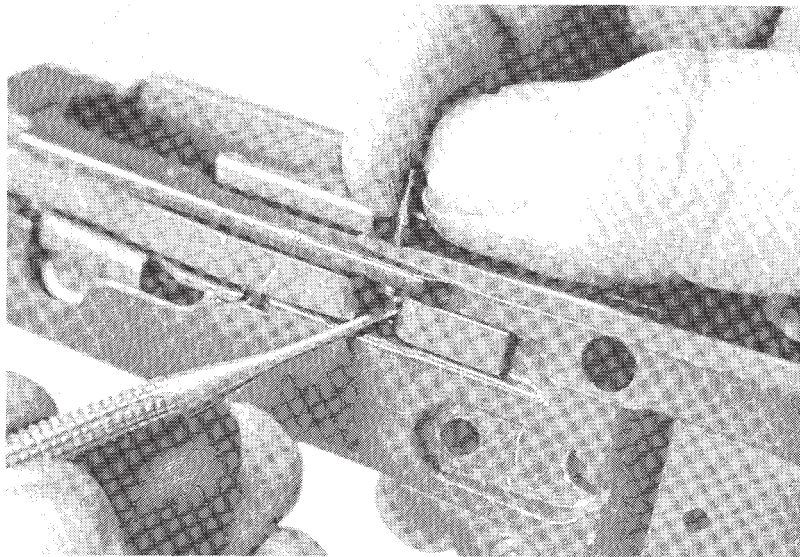
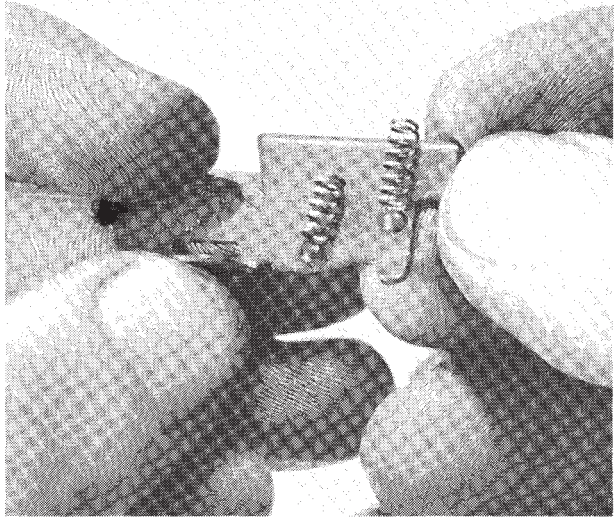
- 32.** The cartridge stop and flapper pivot pin is also in a blind hole, and is removed in the same way as the previous one. Note that the cartridge stop spring will be released when the pin is out, so control it.



- 33.** Remove the cartridge stop and its spring toward the left, and move the flapper inward and take it out toward the top of the housing.

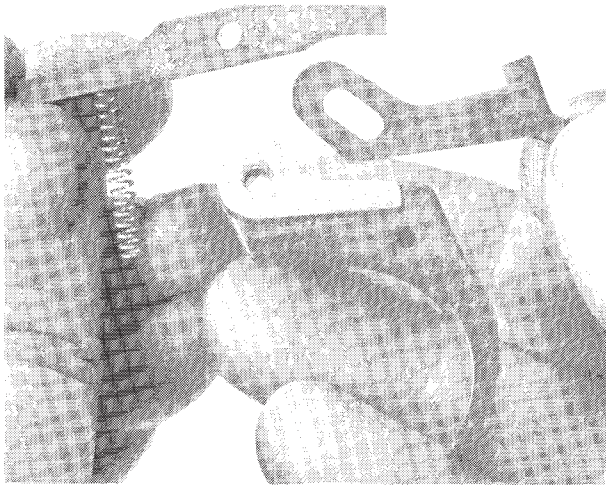
Reassembly Tips:

- 1.** When replacing the cartridge stop system, note that the cartridge stop spring and the flapper spring are of unequal length. Remember that the shorter spring goes at the front, under the tail of the cartridge stop.

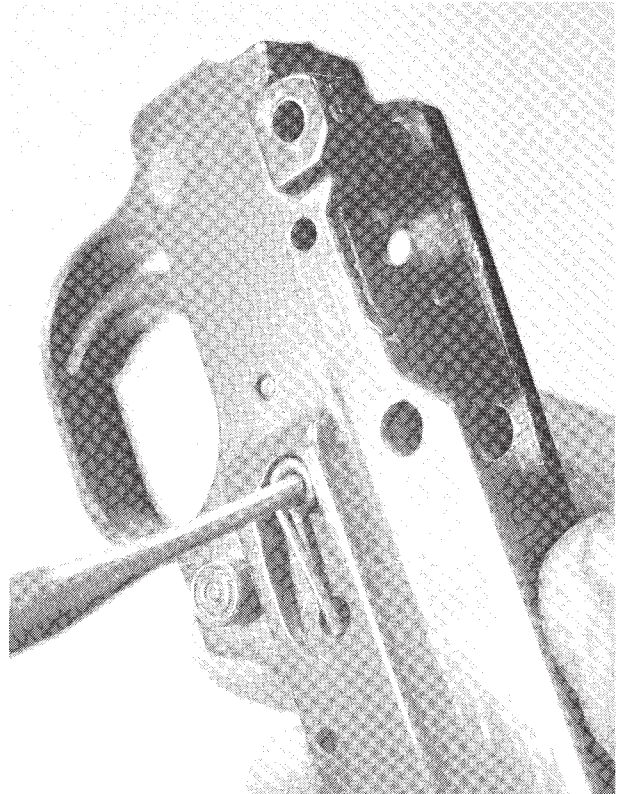


- 2.** When replacing the flat cartridge stop spring, it is necessary to lay the housing on its right side on a firm surface, and use a small drift punch to depress the spring at its pin dip to allow passage of the pin.

- 3.** It is possible to install the sear/trigger/disconnector system by just holding them in place, but the use of a slave pin to hold the parts together will make it much easier. Be sure the lower end of the sear spring enters its hole inside of the trigger housing, and be sure the rear tail of the disconnector goes in front of the trigger spring plunger at the rear.



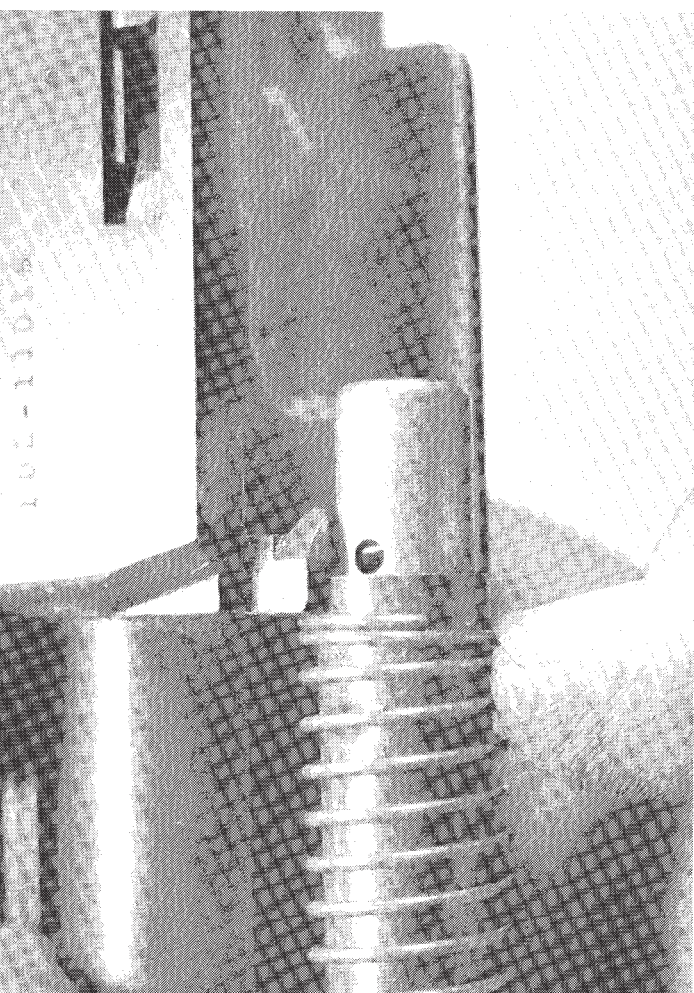
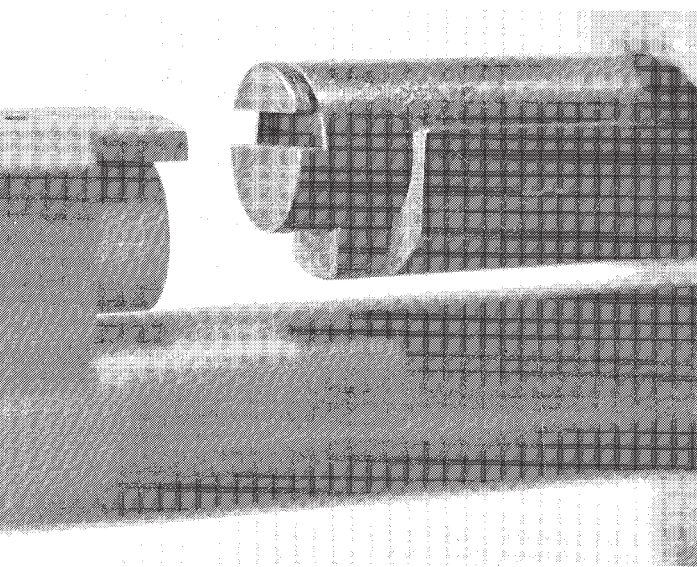
- 4.** When replacing the hammer springs, they must be reinserted from inside the trigger group. When the long arm of the spring is protruding to the outside, insert a drift punch into the center of the spring, and tilt the drift toward the front of the housing, levering the spring into its hole.



- 5.** Installing the hammer is perhaps the most difficult of reassembly operations. Be sure the short inner arms of both hammer springs engage the underside of the small roller at the lower rear of the hammer. Push the hammer straight downward, and insert a drift punch through the hammer pivot hole to hold it in place for insertion of the cross pin. Be sure the spring ends are not allowed to slip from beneath the roller during installation of the pin. Remember to replace the spring cross pin, and re-hook the spring arms onto the hammer pivot pin.



6. When replacing the magazine tube, note that the slot in the tube end piece is offset, and must fit onto the flange at the rear of the gas piston housing. The larger area of the end piece goes toward the barrel, as shown.



7. When replacing the magazine tube and recoil spring assembly, note that at the rear the spring must bear against the receiver, and must not extend into the recess for the rear tip of the magazine tube, as shown.



8. When properly assembled, the spring and tube will be as shown.



Ruger American

Data: Ruger American

Origin: United States

Manufacturer: Ruger, Newport, NH

Cartridge: .243 Win., .270 Win., .308 Win., .30-06 Spfd.

Magazine Capacity: 4 rounds

Overall Length: 42.5 inches

Barrel Length: 22 inches

Weight: 6.25 pounds

The American is Ruger's entry into the newly burgeoning, hunting rifle bargain market. Like many others, it is inexpensively constructed, but is still a good value and easy to maintain. Like many others in this bracket, it also utilizes a three-lugged bolt design to reduce the bolt handle rise when manipulating the bolt, thereby closing the boreline to line-of-sight distance.

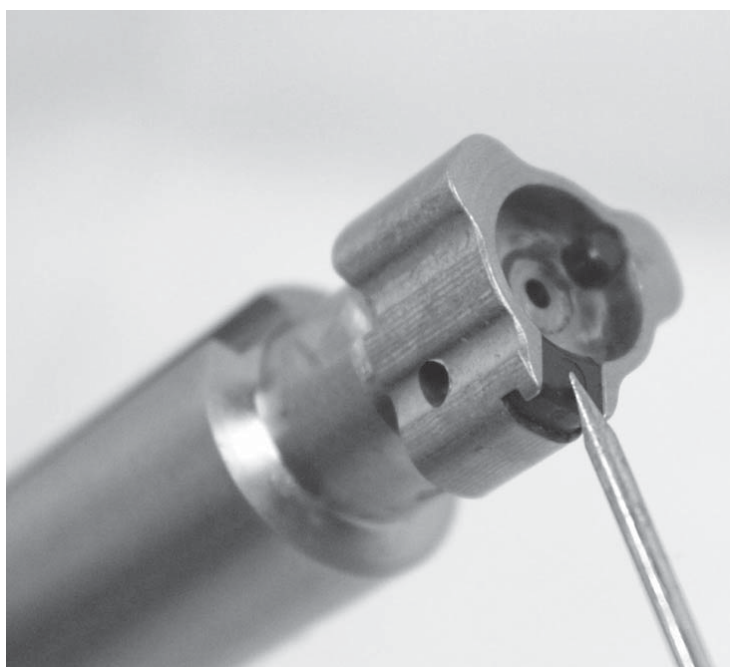
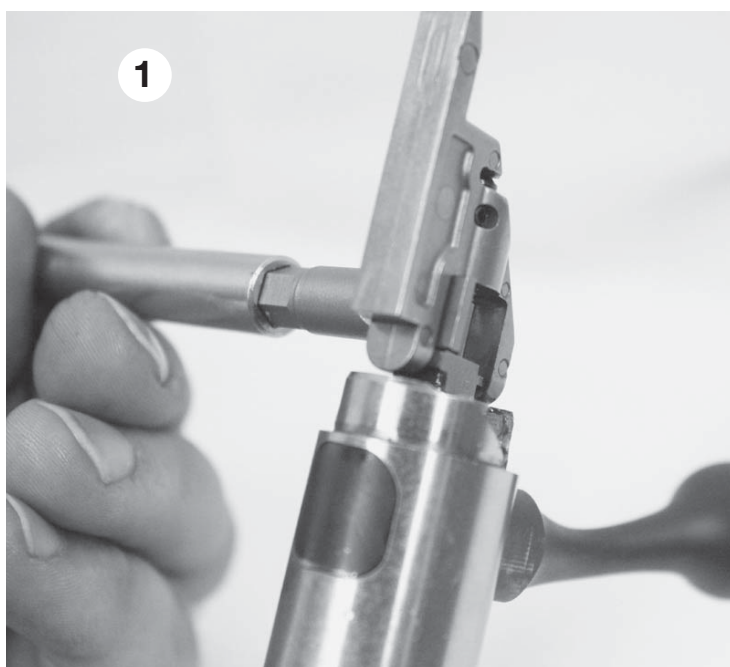
Disassembly:

1. Open the bolt, depress the bolt stop lever, and pull the bolt out the rear of the receiver.



2. Rotate the bolt shroud slightly clockwise, approximately an eighth of a turn, while pulling back slightly on the shroud (picture 1). This allows the shroud to align with tabs on the cocking piece. Remove the shroud as it pops free (picture 2).

- 3.** Insert a screwdriver into the gap between the cocking piece and the firing pin (picture 1) so that the cocking piece is further withdrawn a slight amount. Then rotate the entire firing pin assembly approximately 90 degrees to clear the internal bolt body tabs and pull the firing pin assembly out the back of the bolt body (picture 2). Then the bolt handle can be easily pulled from the bolt body.



- 4.** The extractor can be pushed from its slot laterally either out from or into the bolt face. There is a detent ball and spring beneath it that are easily lost.

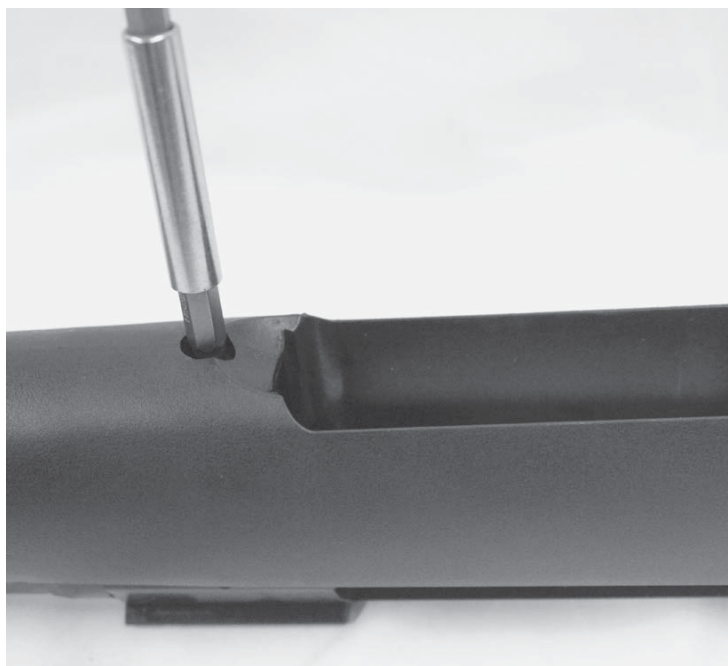


- 5.** The ejector and its spring can be removed by driving out this pin.

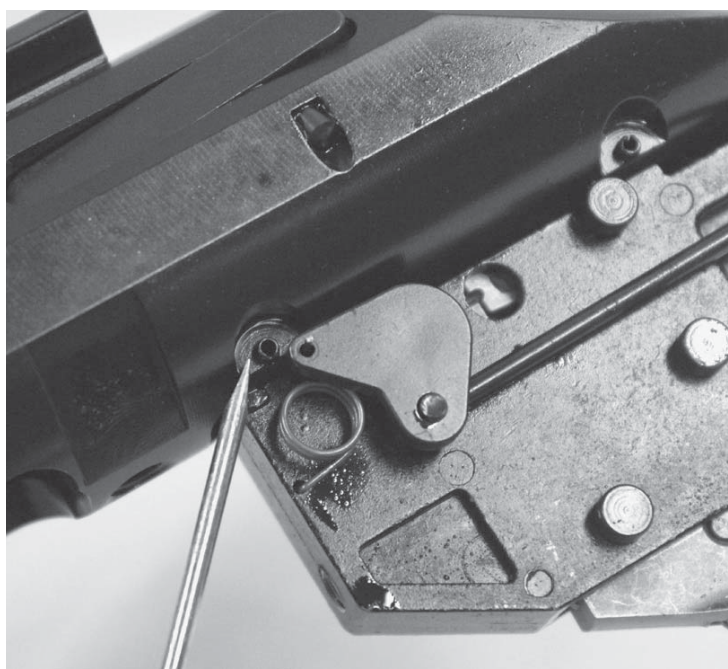
- 6.** Driving out this pin will allow the cocking piece to be unscrewed from the firing pin. The firing pin spring and tabbed bushing can be removed, as well.



- 7.** Unscrew the two action bolts located just in front of and just behind the magazine well. The action can then be removed from the stock.

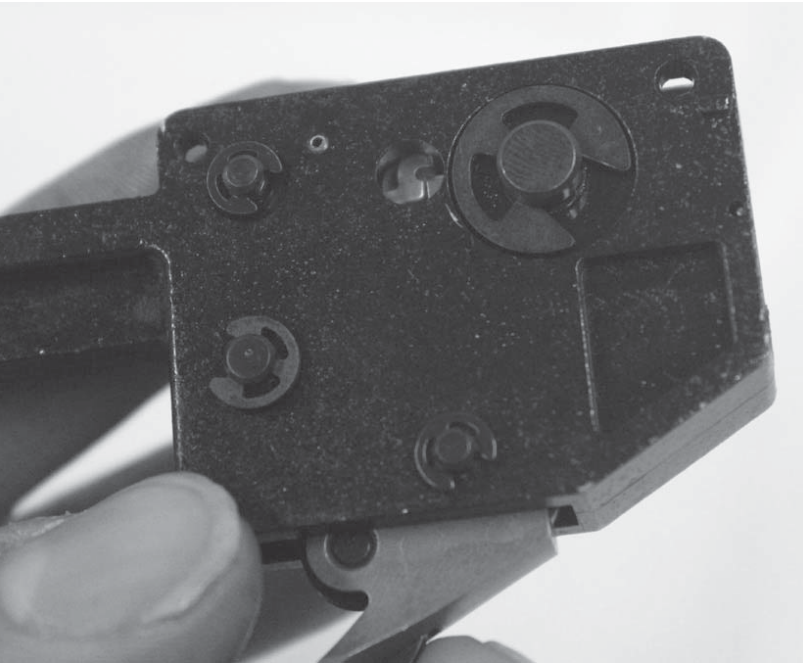


- 8.** This pin, which holds in the bolt stop, can be removed by jiggling the bolt stop. It is loose in its hole and held in only with spring tension.

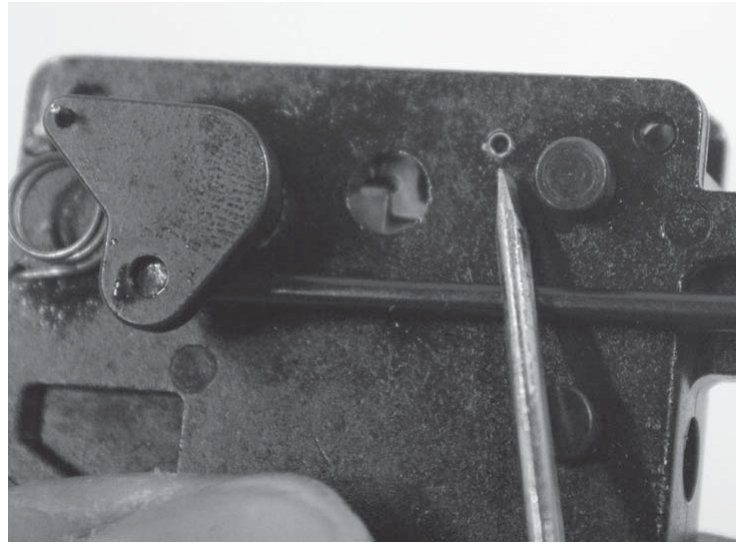


- 9.** Two small roll pins at the top of the trigger assembly hold the assembly to the receiver. Drive these pins out to free the housing.

- 10.** To begin taking down the trigger, remove the four E-clips from the right side of the trigger assembly.



- 11.** Drive out this small spring pin at the top rear of the housing. This will release the sear to rotate up.

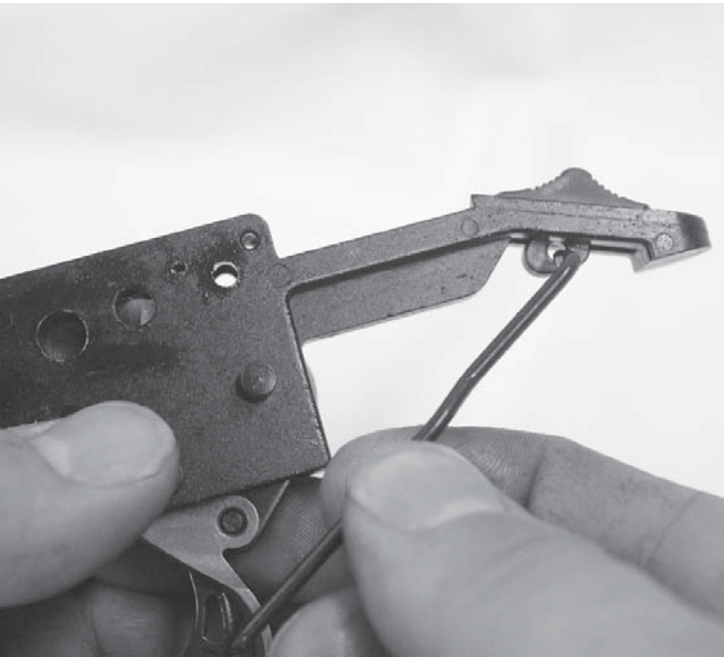


- 12.** Pull the sear pivot pin to remove the sear from the housing. Its large spring can also then be removed from beneath the sear.

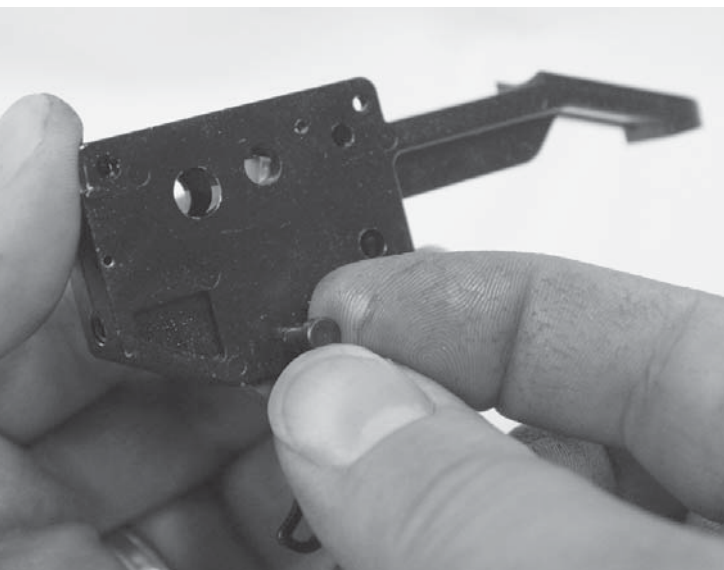
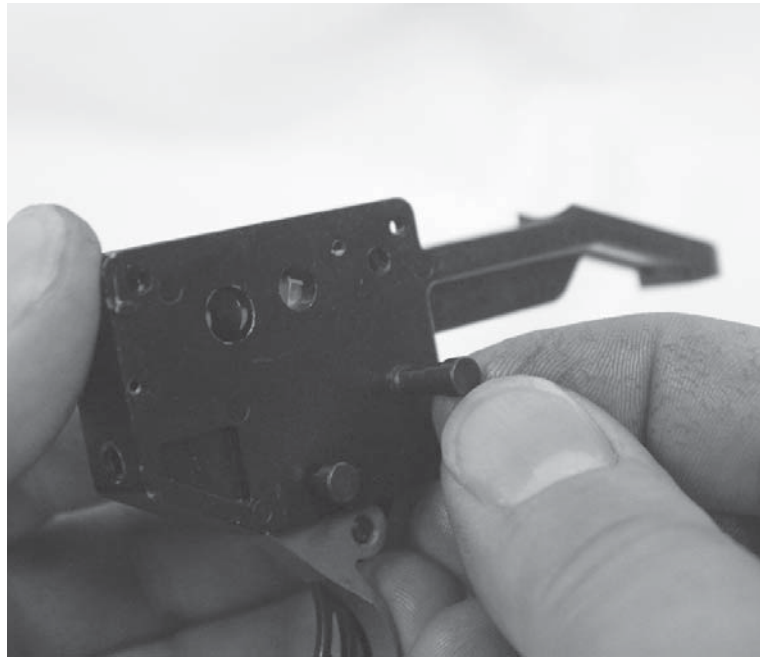


- 13.** Pull the safety cam and its coiled spring from the housing.

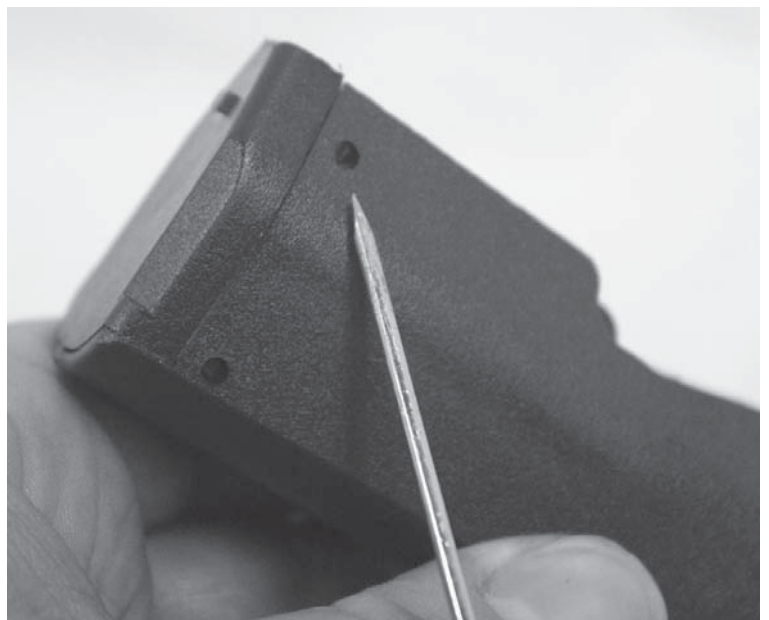
- 14.** Rotate the safety bar down and pull its rear-most end from its hole in the safety button. The safety button can also now be removed.



- 15.** Pull the trigger safety stop pin from the housing.



- 16.** Pull the trigger pivot pin from the housing. The trigger can then be removed downward. The trigger spring lies beneath the trigger pull adjustment screw in the front edge of the housing. If necessary for repair only, the trigger and trigger safety can be separated by driving out the safety pivot pin.



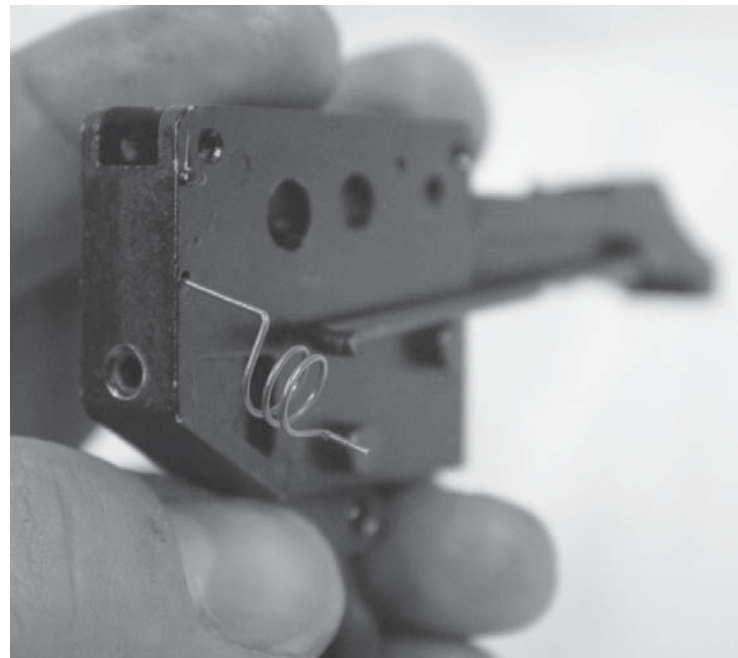
- 17.** The magazine is held together by these two stubs and one more on the left side of the magazine. The rotary-type follower and spring lie within. There should be no reason to disassemble the magazine unless it is malfunctioning.

Reassembly Tips:

- 18.** The magazine catch at the front of the magazine is retained by this pin. Driving it out will free the catch and catch spring.



- 1.** This is the proper orientation of the safety bar and button. The button's "shoe" should point forward, and the bend in the bar is closer to the rear of the bar than the front.



- 2.** The safety spring's long arm goes into the housing and the short arm into the safety cam.



Ruger Mini-14

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the Ruger Mini-14 also apply to the following guns:

Ruger Mini-14 Ranch Rifle Ruger Mini Thirty

Ruger Mini-14 Target

Data: Ruger Mini-14

Origin: United States

Manufacturer: Sturm, Ruger & Company
Southport, Connecticut

Cartridge: .223 Remington (5.56mm)

Magazine Capacity: 5 rounds

Overall Length: 37-1/4 inches

Barrel Length: 18-1/2 inches

Weight: 6.4 pounds

While externally it may appear to be a miniature of the U.S. M-14 rifle, the Mini-14 is all Ruger on the inside. Introduced in 1973, this neat little carbine has gained wide acceptance both as a sporting gun and in police and guard applications. There has been one small change in the original design—a bolt hold-open button was added on the top left side of the receiver, and all guns of more recent manufacture will have this feature. The Ruger Mini Thirty in 7.62x39 and the Ruger Ranch Rifle are mechanically the same.

The Mini-14 Target model with a thumbhole stock and barrel stabilizer on the muzzle has a couple minor differences, but will otherwise follow these steps.

Disassembly:

1. Remove the magazine, and cycle the action to cock the internal hammer. Push the safety back to the on-safe position, and insert a non-marring tool through the hole at the rear of the trigger guard to spring the guard downward at the rear. Swing the guard toward the front until it stops.



2. Remove the trigger housing downward.

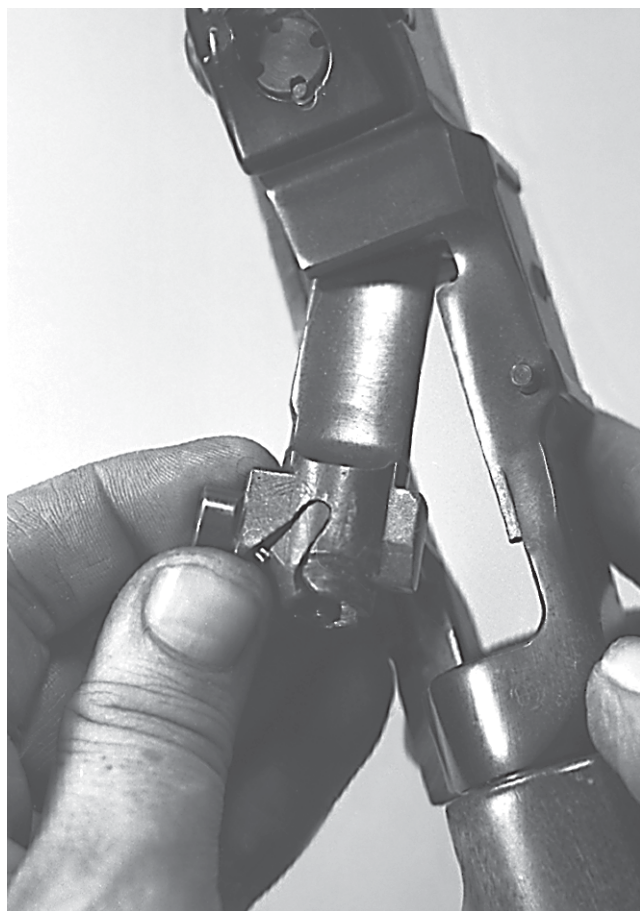


3. Tip the rear of the action upward out of the stock, and remove it toward the front.



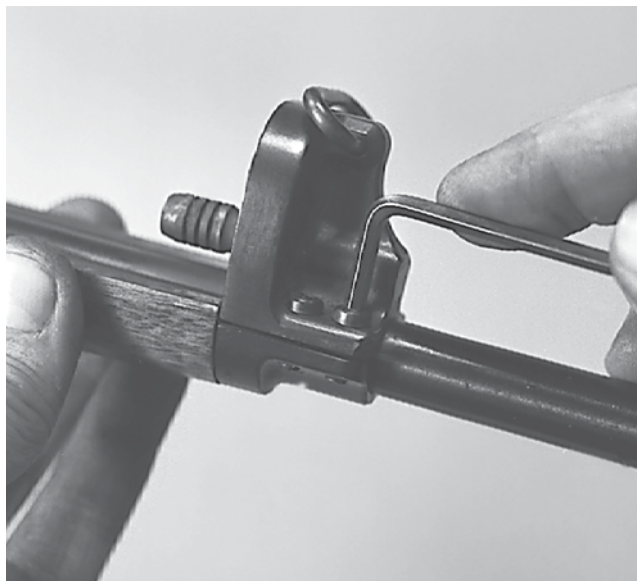
4. Grasp the recoil spring firmly at the rear, where it joins the receiver, and lift the tip of the guide out of its hole in the front of the receiver. **Caution:** *This is a strong spring, so keep it under control.* Tilt the spring and guide upward, slowly release the tension, and remove the spring and guide toward the rear.

5. Move the slide assembly toward the rear until its rear lug aligns with the exit cut in the slide track, and move the operating handle upward and toward the right. Remove the slide assembly.



6. Move the bolt forward to the position shown, and remove it upward and toward the right. The bolt must be turned to align the underlug of the firing pin with the exit cut in the bottom of the bolt track.

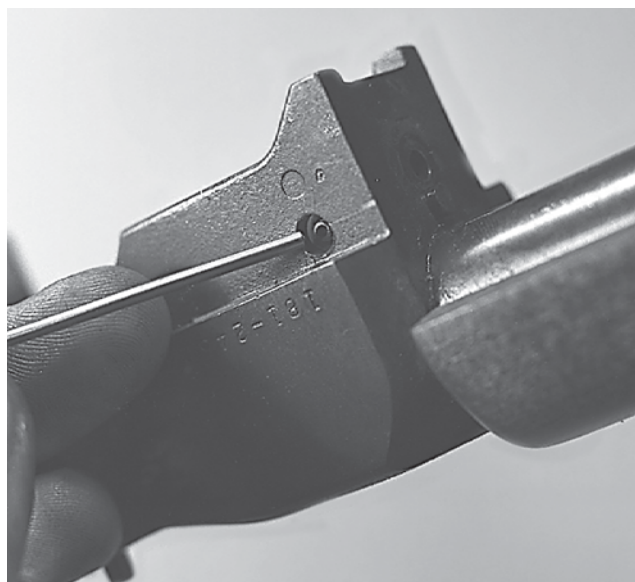
- 7.** In normal takedown, the gas block assembly should not be removed. If it is necessary, use an Allen wrench to remove the four vertical screws, separating the upper and lower sections of the gas block. The gas port bushing will be freed with removal of the lower block, so take care that it isn't lost.



- 8.** Slide the bolt hold-open cover downward out of its slots in the receiver and remove it.

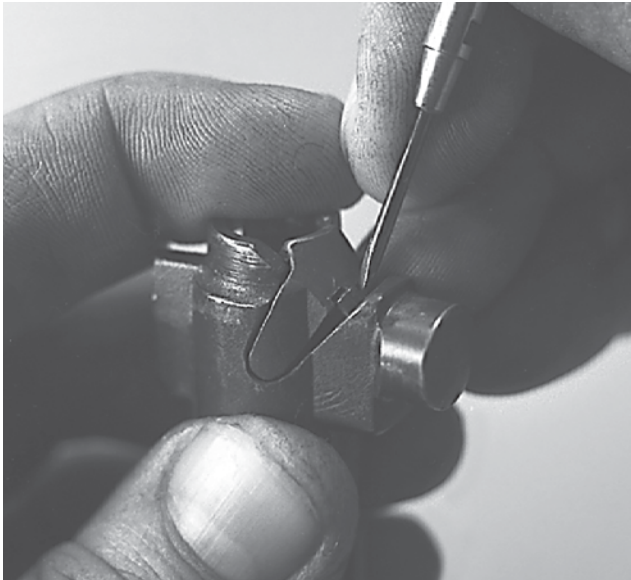


- 9.** Depress the bolt latch plunger on top of the left receiver rail, and lift the bolt lock out of its recess toward the left. **Caution:** The bolt latch retains the plunger, so control the plunger and ease it out upward, along with its spring.



- 10.** The front magazine catch, located in the front of the receiver below the barrel, is retained by a roll cross pin, accessible through holes on each side. Drift out the cross pin, and remove the catch toward the front.

- 11.** Insert a small screwdriver beside the extractor plunger, and turn and tip the screwdriver to depress the plunger. Move the extractor upward out of its recess. **Caution:** *As the extractor post clears the ejector it will be released, so restrain the ejector and ease it out toward the front. Also take care to keep the extractor plunger under control, and ease it out.* Removal of the extractor will also free the firing pin to be taken out toward the rear.



- 12.** Close and latch the trigger guard, and insert a piece of rod or a drift punch through the hole in the rear tip of the hammer spring guide.

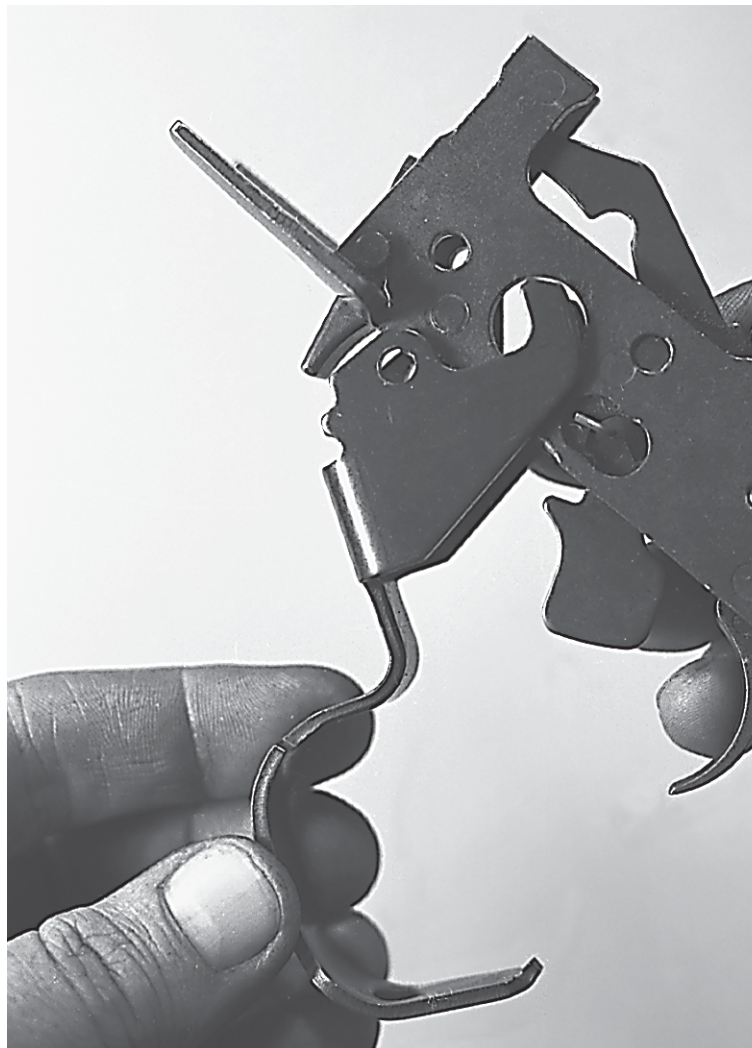


- 13.** Restrain the hammer, move the safety to the off-safe position, and pull the trigger to release the hammer. The rod will trap the hammer spring on the guide. Tip the front of the guide upward, out of its recess at the rear of the hammer, and remove the guide assembly toward the right. If the spring is to be taken off the guide, proceed with care, as the spring is fully compressed.

- 14.** Push out the hammer pivot, and remove the hammer upward and toward the right.



- 15.** Move the safety back to the on-safe position, and take off the trigger guard downward and toward the rear.

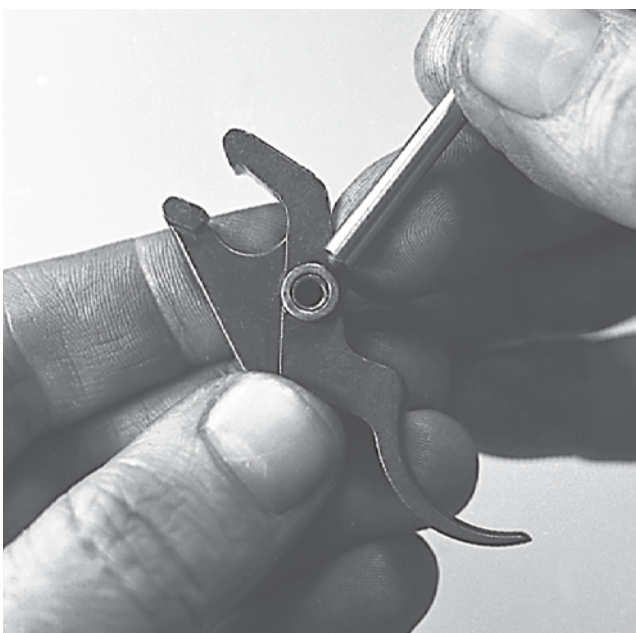


- 16.** Drift out the safety spring pin toward the left, ease the spring tension slowly, and move the spring toward the rear, unhooking it from the safety. Remove the spring toward the right rear.

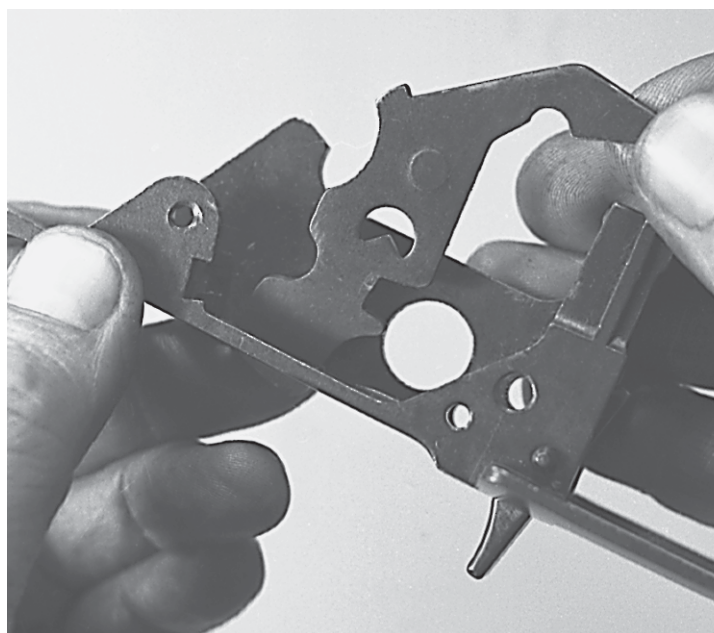


17. Restrain the trigger and sear assembly, and drift out the trigger cross pin.

18. Remove the trigger and sear assembly upward.



19. The trigger spring is easily detached from the trigger and the pivot bushing can be drifted out to free the secondary sear and its coil spring from the top of the trigger. **Caution:** Use a roll pin punch to avoid damaging the bushing, and take care to restrain the sear against the tension of its spring.



20. Tip the upper portion of the safety catch toward the right, moving its pivot stud out of its hole in the trigger housing, and remove the safety catch.

- 21.** The main magazine catch is retained by a cross pin at the front of the trigger housing, and the pin must be drifted out toward the left. **Caution:** *The strong magazine catch spring will also be released when the pin is removed, so insert a shop cloth into the housing behind the spring to catch it.* This spring is rather difficult to reinstall, so if removal is not necessary for repair, the catch is best left in place.



Reassembly Tips:

- 1.** When installing the trigger and sear assembly, tilt the assembly forward, and be sure the front hooks of the trigger spring engage the top of the cross piece in the housing. Push the assembly downward and toward the rear until the cross pin can be inserted.



When replacing the safety spring, be sure that its front arm goes on the right side of the rear arm of the magazine catch spring. Otherwise, the safety spring pin cannot be fully inserted.



Ruger No. 1

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Ruger No. 1 also apply to the following guns:

Ruger No. 1A Light Sporter, 1S Medium Sporter

Ruger No. 1B

Ruger No. 1H Tropical Rifle

Ruger No. 1RSI International

Ruger No. 1V Varmint

Ruger No. 3 Carbine

Data:	Ruger No. 1
Origin:	United States
Manufacturer:	Sturm, Ruger & Company Southport, Connecticut
Cartridges:	Most popular calibers from 22-250 to 458
Magazine capacity:	3 to 5 rounds
Overall length:	42 inches
Barrel length:	22, 24 and 26 inches
Weight:	8 pounds

In 1967, Bill Ruger recreated the classic single shot rifle, and over the years it has proved to be an outstanding success. The action and some other features of the gun have some relationship to the old Fraser and Farquharson rifles from England, but the mechanism is pure Ruger, and superior to any other gun of this type, before or since. Also, in contrast to the older guns of this type, the takedown and reassembly operations are not difficult. A plainer carbine version, the No. 3, was made from 1972 to 1987.

Disassembly:

1. Remove the angled screw on the underside of the forend and take off the forend forward and downward.



2. Remove the forend takedown nut, and set it aside to prevent loss.



3. Cycle the action to cock the hammer, and insert a small piece of rod through the transverse hole in the front tip of the hammer spring strut. Pull the trigger to release the hammer.

4. Move the hammer spring assembly slightly toward the rear, tip the front of the assembly downward and remove it toward the front. If the assembly is to be taken apart, proceed with caution, as the spring is compressed.





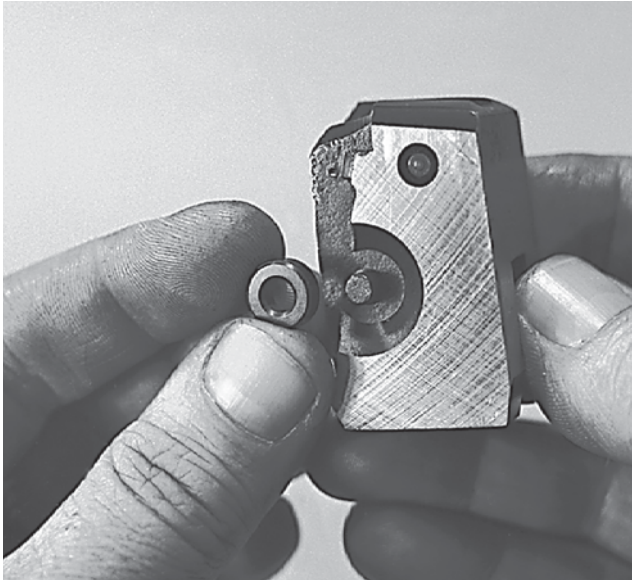
- 5.** Remove the cap screw on the lever pivot, and push out the pivot toward the opposite side. The action should be opened while this is done. If the screw is very tight, the lever pivot head has a screw slot, and it can be held with another screwdriver.

- 6.** Remove the hammer downward.

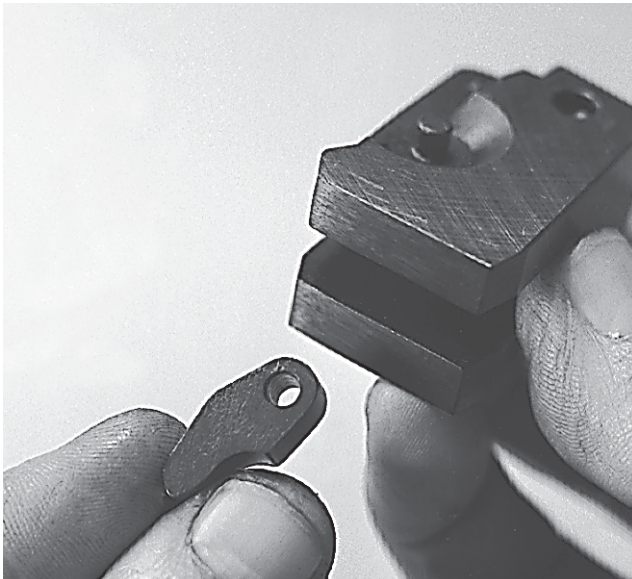


- 7.** Push the breechblock back upward, close the lever, then open the lever about half way, and remove the lever and breechblock assembly downward out of the receiver as a unit.

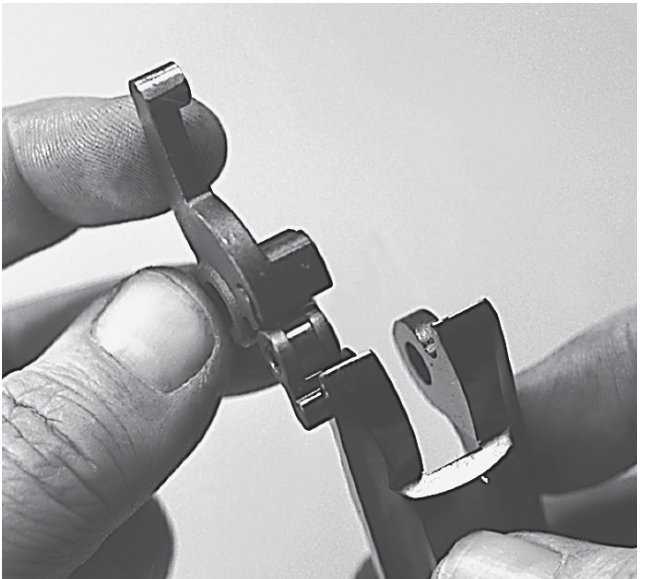
- 8.** Detach the breechblock from the lever arm, and remove the ejector roller from the left side of the breechblock.



- 9.** Holding the breechblock with its left side downward, reach into the underside of the block and work the hammer transfer block back and forth until its pivot pin protrudes from the left side enough to be caught with a fingernail or small screwdriver and pulled out. The pin has a cannellure at its left tip for this purpose.



- 10.** Remove the hammer transfer block from the bottom of the breechblock. The firing pin and its return spring can now be taken out from inside the breechblock.

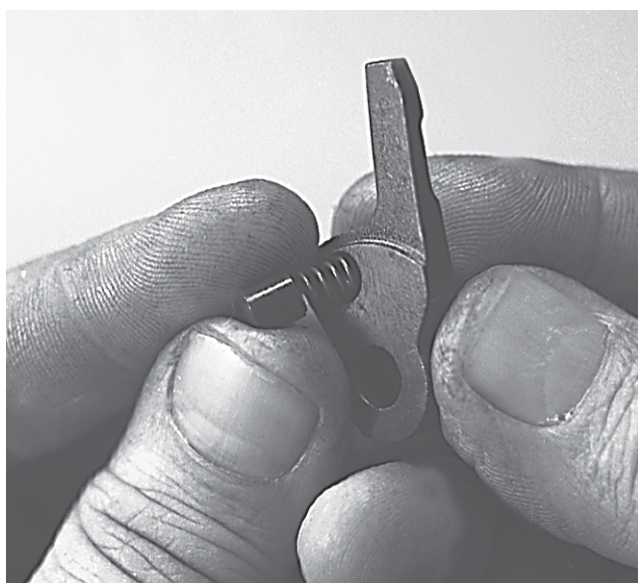


- 11.** The breechblock arm and the lever links are easily separated from each other. Note that the links are joined by a roll pin, and this should be left in place unless removal is necessary for repair.

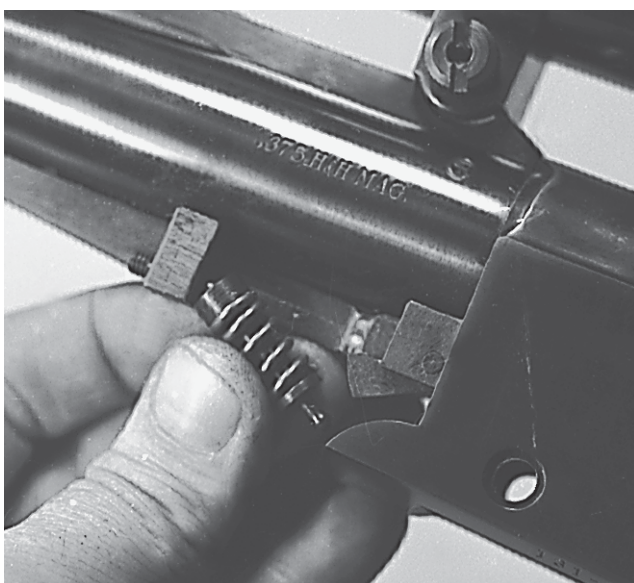
- 12.** Backing out the cross screw in the tail of the lever will allow removal of the lever latch and its spring.



- 13.** Remove the ejector downward, and take care not to lose the plunger and spring mounted in its side.



- 14.** The plunger and spring are easily removed from the side of the ejector.

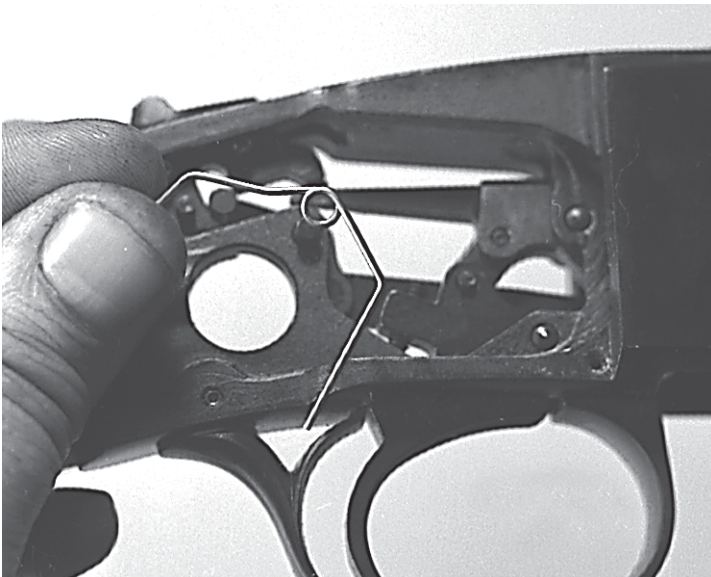
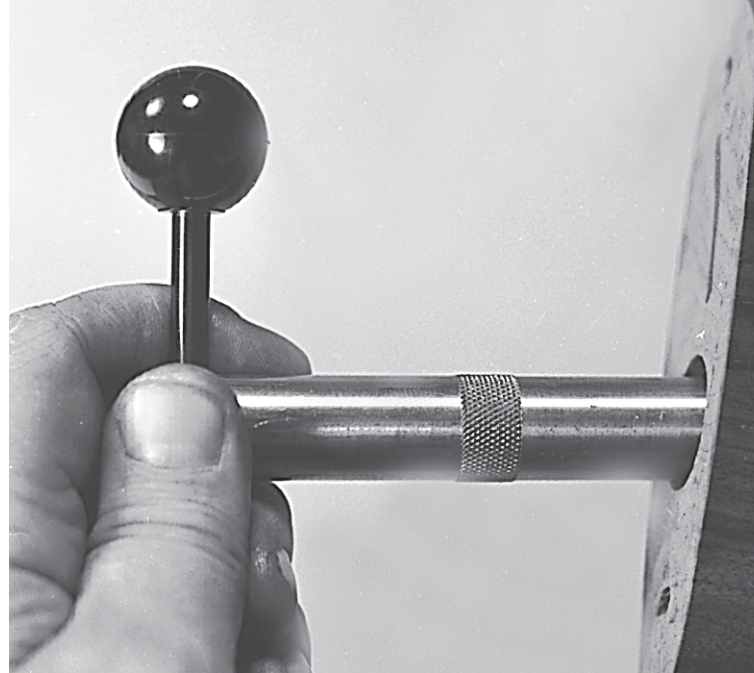


- 15.** Tip the ejector lever (ejector cam) downward, and take off its spring and guide assembly downward. Note that the guide is two separate parts.

- 16.** Drifting out its pivot pin will allow removal of the ejector cam lever toward the front.



- 17.** The buttstock is retained by a through-bolt from the rear. Take off the buttplate, and use a B-Square stock tool or a large screwdriver to back out the stock bolt. Remove the stock toward the rear. If it is very tight, bump the front of the comb with the heel of the hand to start it.

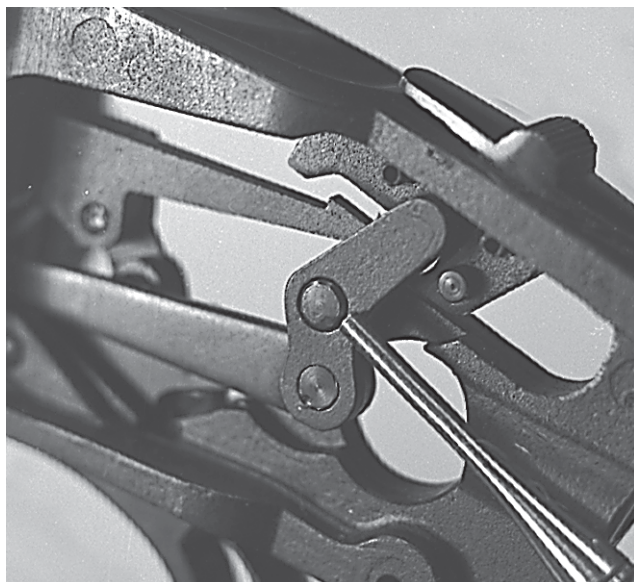


- 18.** Unhook the upper arm of the safety positioning spring from its stud on the safety, and remove the spring from its mounting post toward the right.

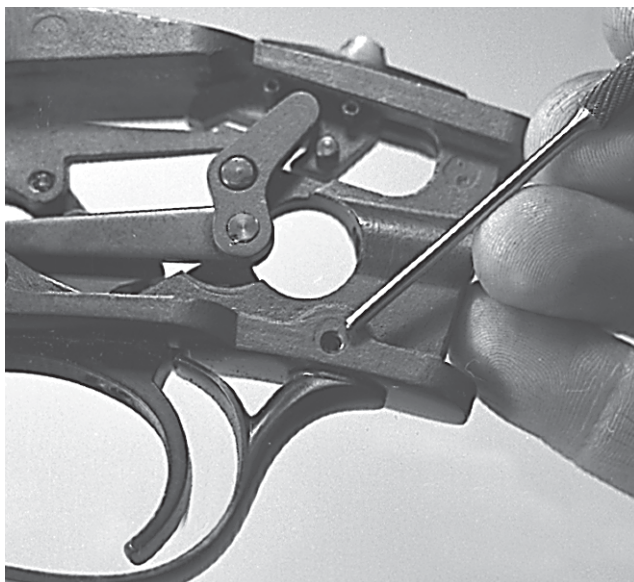
- 19.** Removal of the safety button requires the drifting out of the two roll pins in its underlug, just below the upper tang.



- 20.** Drifting out this post from the opposite side (from right to left) will release the safety arm and safety bar as a unit to be moved toward the rear and taken out toward the side. This is the same post that is the mounting stud for the safety positioning spring.



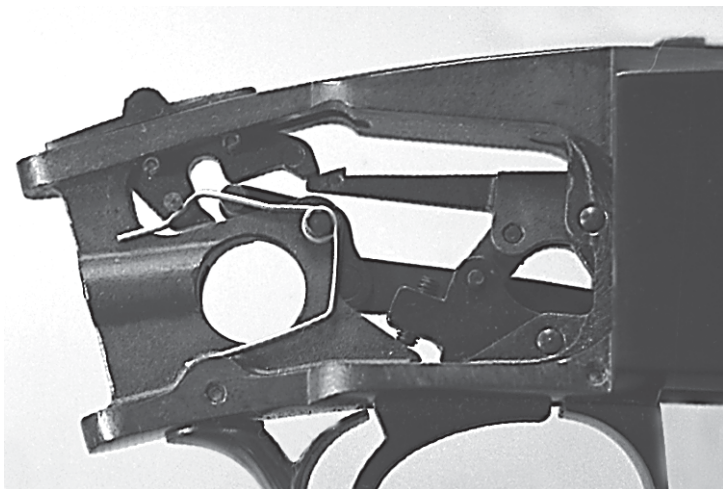
- 21.** The trigger guard is retained by two roll pins at the front and rear, crossing the lower tang of the receiver. When these are drifted out, the guard is removed downward.



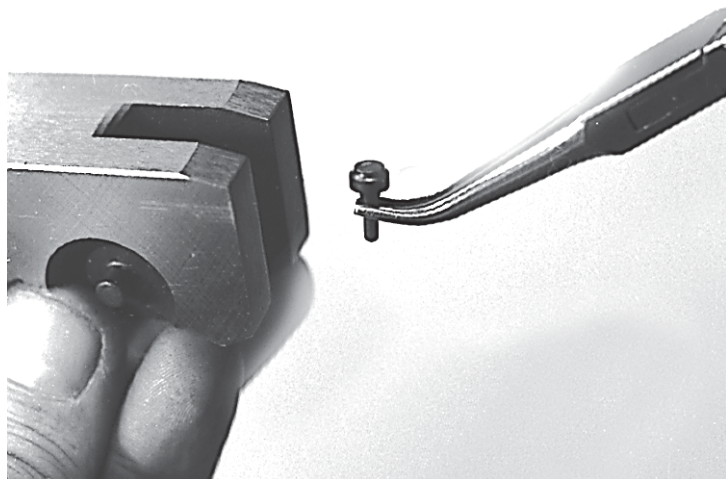
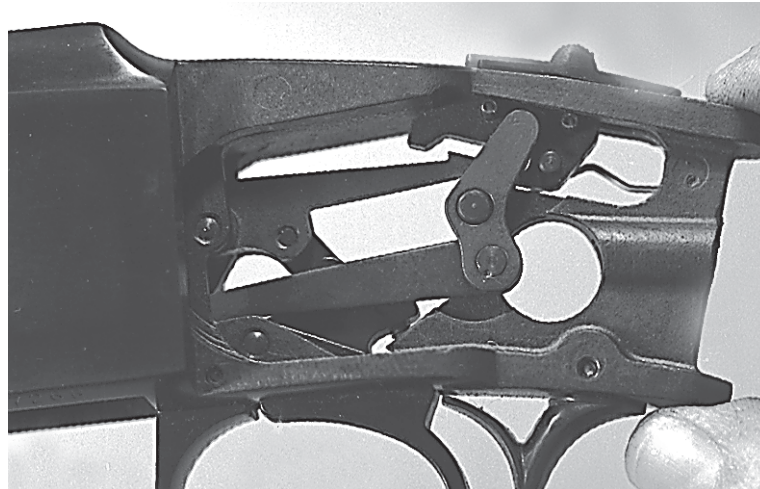
- 22.** The trigger and sear are retained by cross pins, and are joined by a link. After the pins are removed, the trigger and sear are moved slightly toward the rear, then are taken out downward, with their attendant springs.

Reassembly Tips:

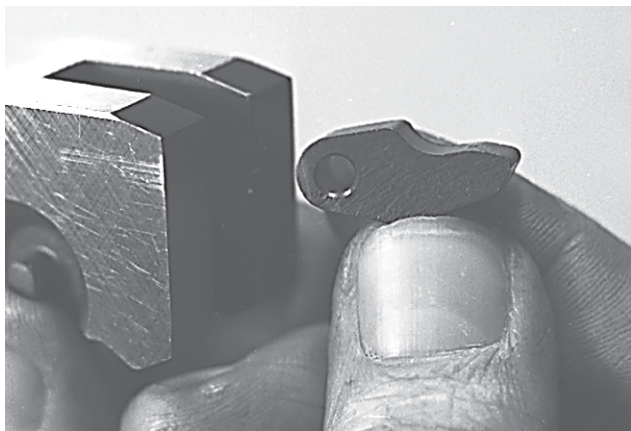
1. The view of the right side of the receiver with the stock removed shows the internal parts in their proper order. The safety is shown in the on-safe position.



2. The view of the left side of the receiver shows the safety in the off-safe position.



3. After the firing pin spring is in place inside the breech block, grip the firing pin with forceps or very slim pliers, and set the firing pin point into the spring.
4. When replacing the hammer transfer block, note that the concave area in its lower extension goes toward the rear.



5. When replacing the hammer spring assembly, note that the down-turned neck at the rear of the strut goes in that position—downward.

Ruger Model 77

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Ruger Model 77 also apply to the following guns:

Ruger Model 77R, RS Magnum
Ruger Model 77RLS
Ruger Model 77V Varmint

Ruger Model 77RL
Ruger Model 77RSI International
Ruger Model 77R Mark II

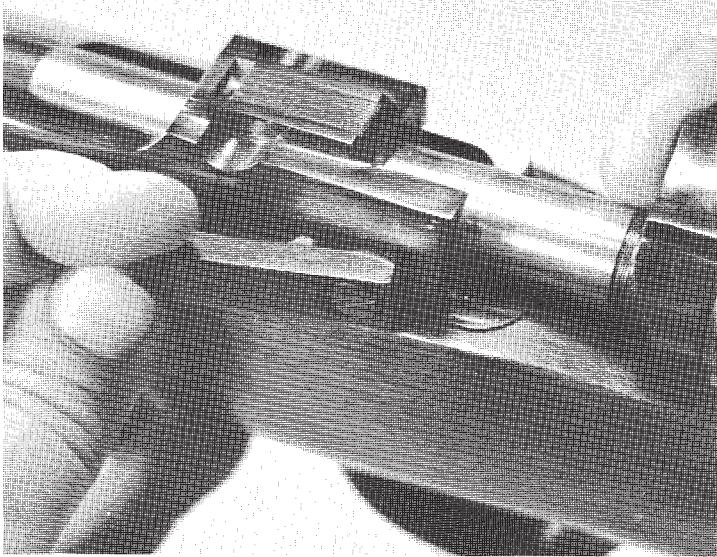
Data: Ruger Model 77
Origin: United States
Manufacturer: Sturm, Ruger & Company
Southport, Connecticut
Cartridges: Most popular calibers
from 22-250 to 458
Magazine capacity: 3 to 5 rounds
Overall length: 42 to 44 inches
Barrel length: 22 to 26 inches
Weight: 6-3/4 pounds (Standard)

With some elements of the classic Mauser/Springfield rifle, in 1968 Bill Ruger created a gun that includes the best points of the old and new. Internally, the Model 77 is all modern, with several Ruger innovations, such as the angled front action mounting screw which pulls the action not only down in the stock, but also back, snugging the recoil lug against the interior of the stock. The firing mechanism is uncomplicated and takedown and reassembly are not difficult. On the Model 77 Mark II, introduced in 1989, the safety has three positions, and the ejector is a spring-and-plunger type. These features will cause no difficulty in takedown.

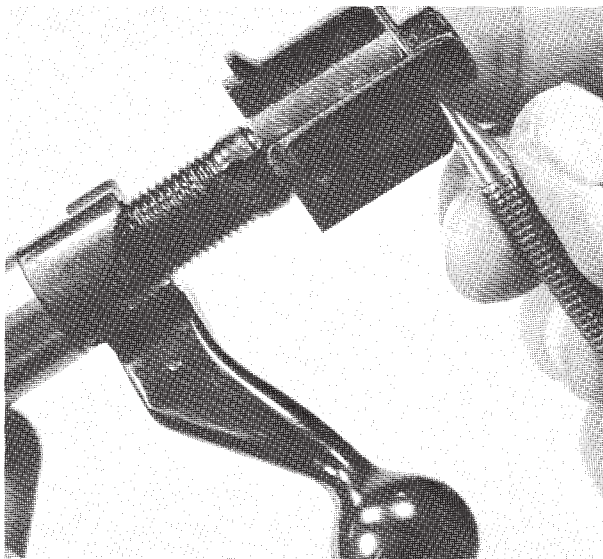
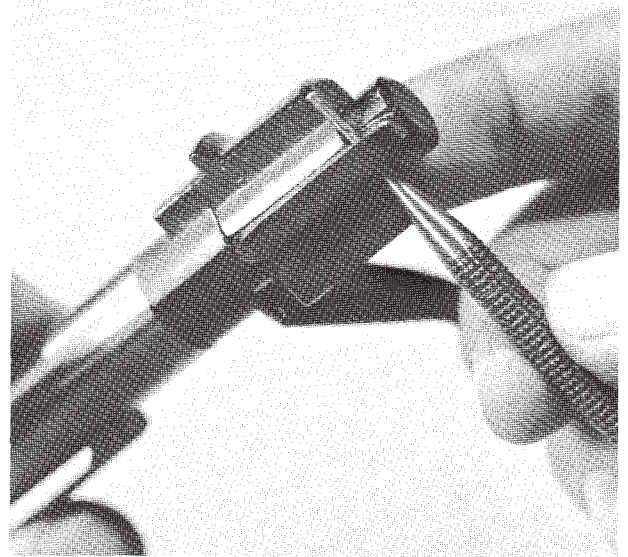


Disassembly:

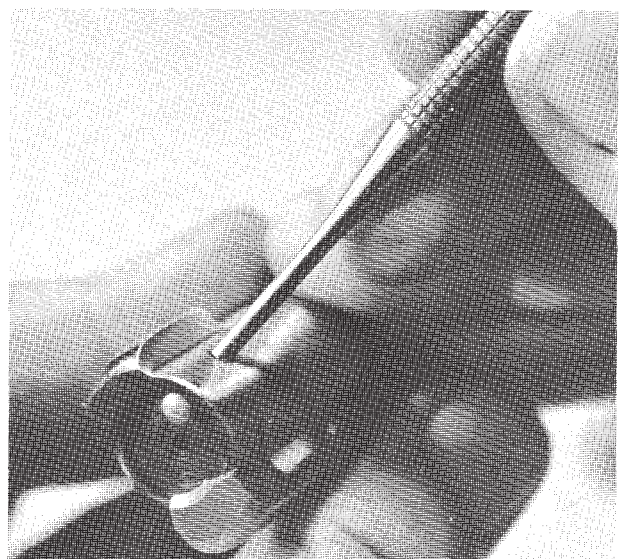
1. Open the bolt and move it to the rear, while holding the bolt stop pulled out toward the left. Remove the bolt from the rear of the receiver.



2. Insert a small piece of rod (or a drift punch) at the lower rear of the cocking piece, into the hole provided. This will lock the striker in rear position. Unscrew the striker assembly counter-clockwise (rear view).

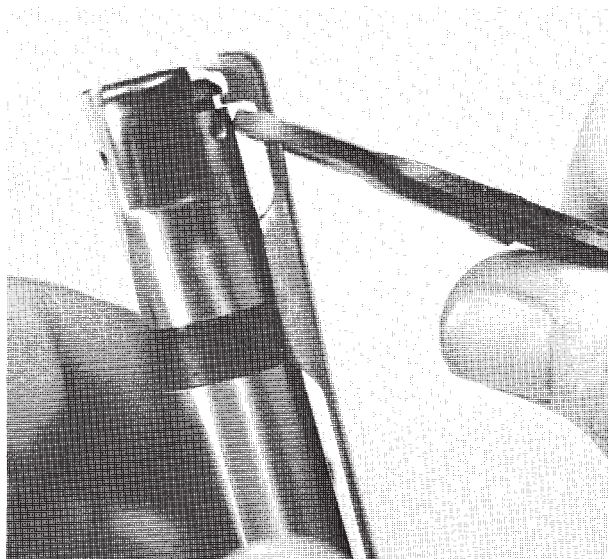


3. Remove the striker assembly from the rear of the bolt. It is possible to grip the front of the striker in a vise and push the bolt end piece forward to expose a cross pin in the cocking piece, and drifting out this pin would release the parts of the striker assembly. There is, however, no reasonably easy way to do this without special tools, and the factory cautions against taking this assembly apart.

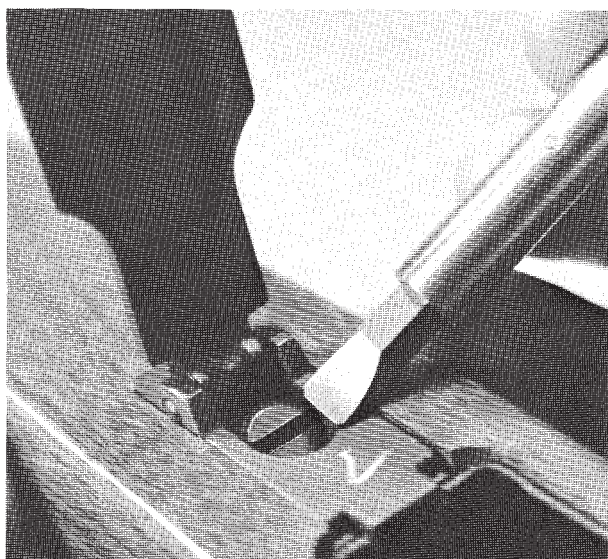
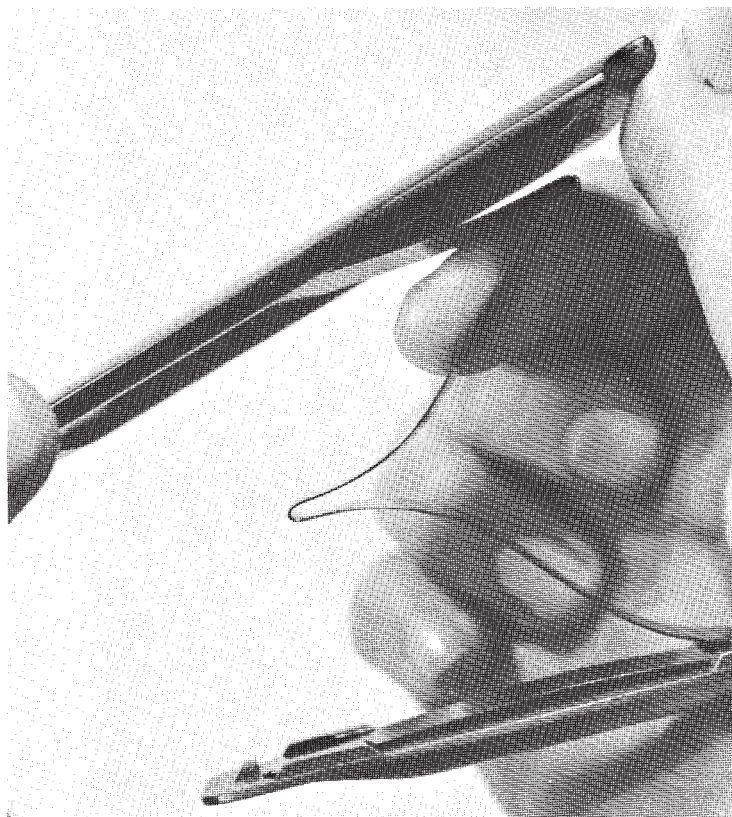


4. Drifting out the vertical pin at the front of the bolt will release the ejector and its spring toward the front. **Caution:** The spring is compressed, so restrain the ejector and ease it out.

- 5.** Turn the extractor counter-clockwise (rear view) until it is aligned with the base of the bolt handle, then use the Brownells extractor pliers or a small screwdriver blade to lift the front underlug of the extractor out of its groove at the front of the bolt, and push the extractor off the flanges of the mounting ring toward the front.



- 6.** Open the magazine floorplate, and slide the magazine spring out of its slots. The follower can be removed from the spring in the same way.

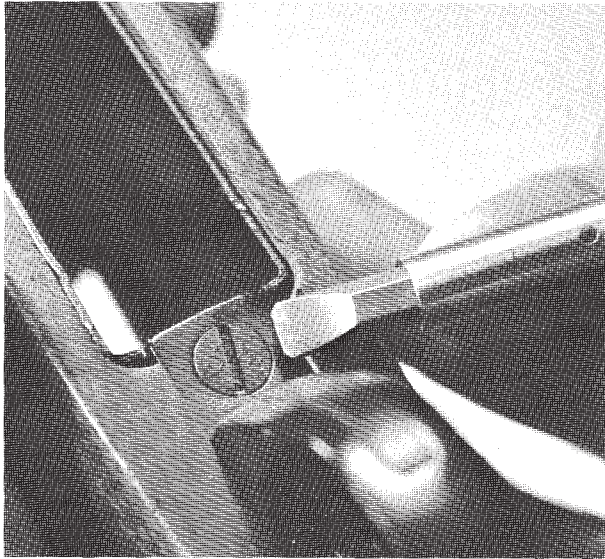


- 7.** Remove the large angled screw inside the front of the magazine floorplate base.

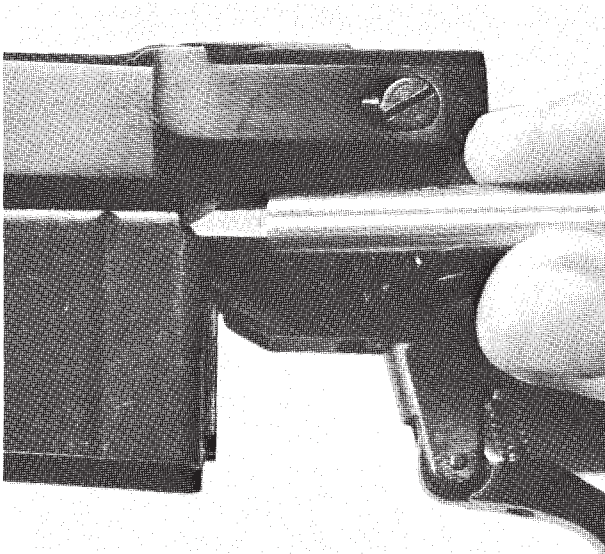
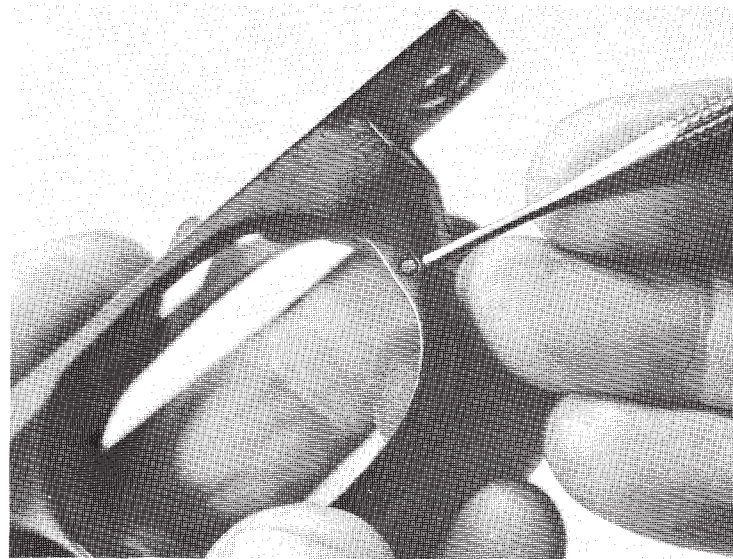
- 8.** Remove the magazine floorplate and its base downward. Pushing out the hinge pin will allow separation of the floorplate and its base.



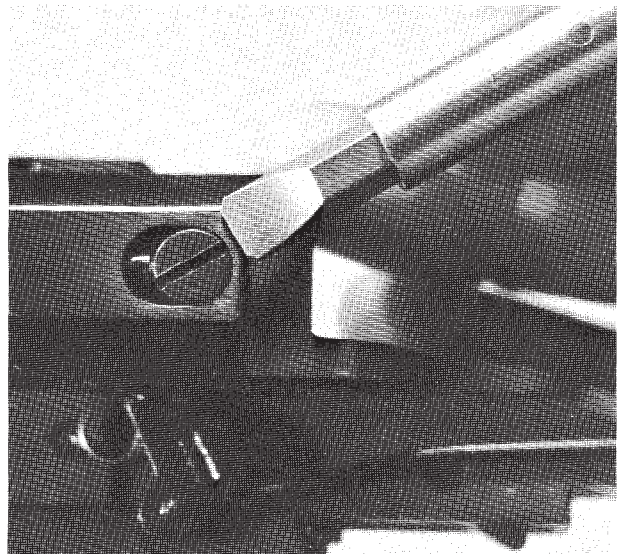
- 9.** Remove the vertical screw at the front of the trigger guard. Remove the vertical screw at the rear of the trigger guard, and take off the trigger guard downward. Separate the action from the stock.



- 10.** Drifting out the cross pin in the front of the trigger guard will allow removal of the magazine floorplate latch and its spring.

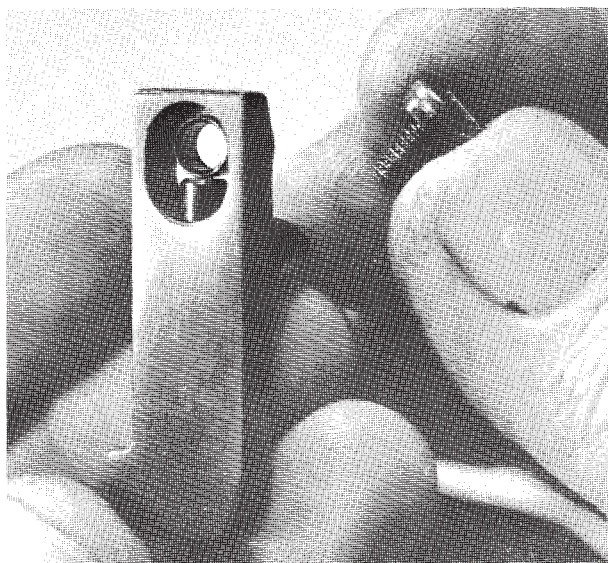


- 11.** The magazine box is a press fit in its recess in the bottom of the receiver. Insert a tool in the openings on each side at the upper rear of the box, and gently pry it away from the receiver.

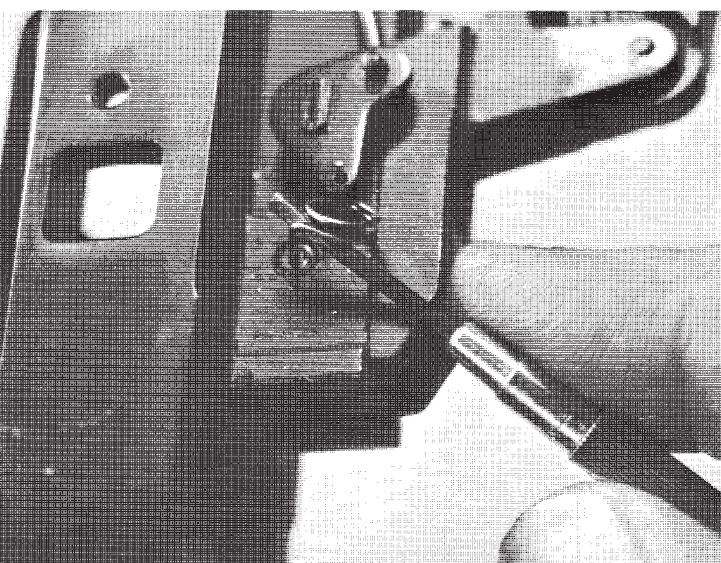
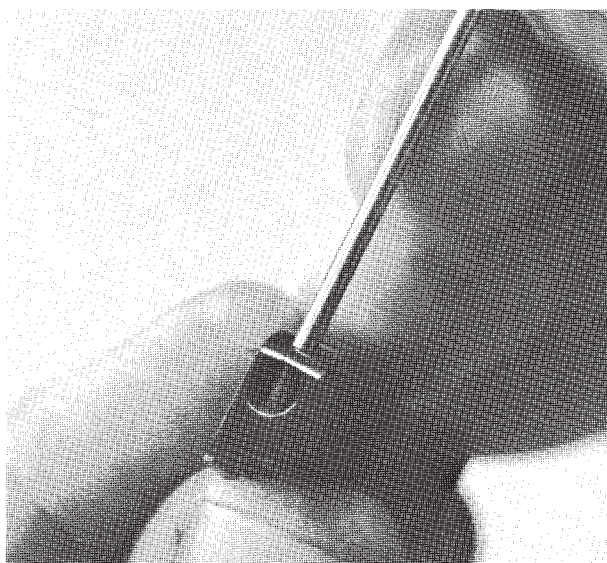


- 12.** The bolt stop is removed by backing out its mounting screw toward the left.

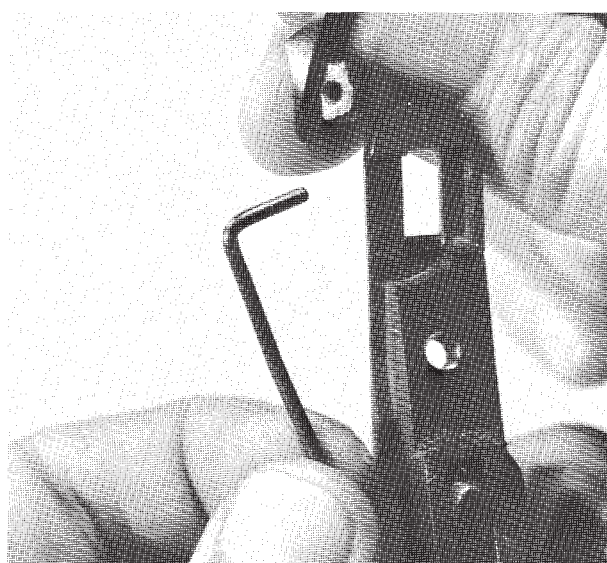
- 13.** As the screw is backed out, the bolt stop plunger will drop from the edge of the screw head to the internal bushing, and the stud screw is then easily removed.



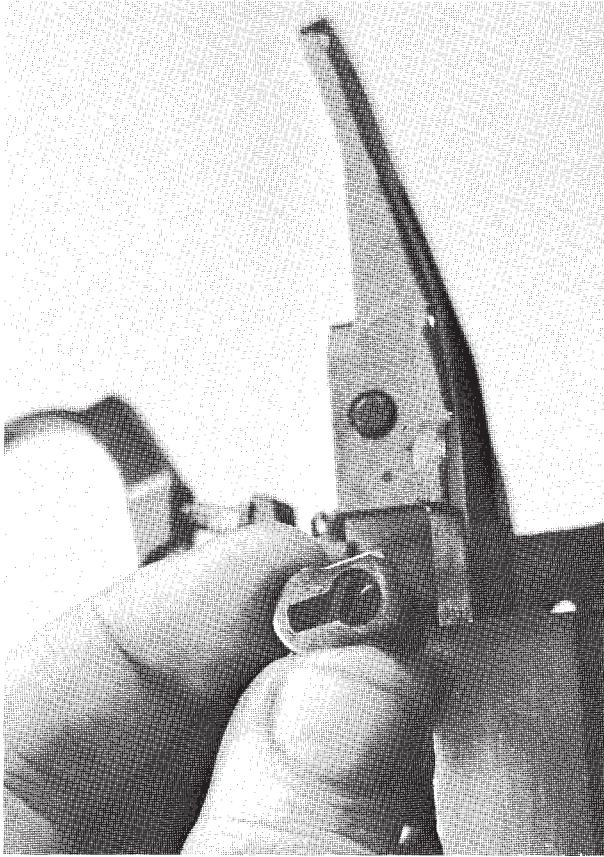
- 14.** Drifting out the vertical roll pin at the front of the bolt stop will allow removal of the spring and plunger toward the front, and the bushing from the rear opening.



- 15.** With the safety in the on-safe position, use a small screwdriver to lift the front arm of the safety positioning spring out of the center of the trigger housing roll pin. When it is clear, swing it downward, and unhook it from the hole in the edge of the safety shaft plate.

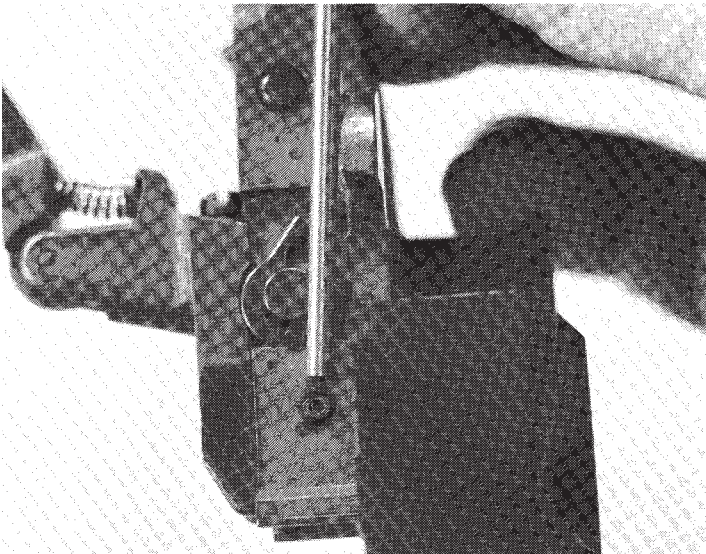
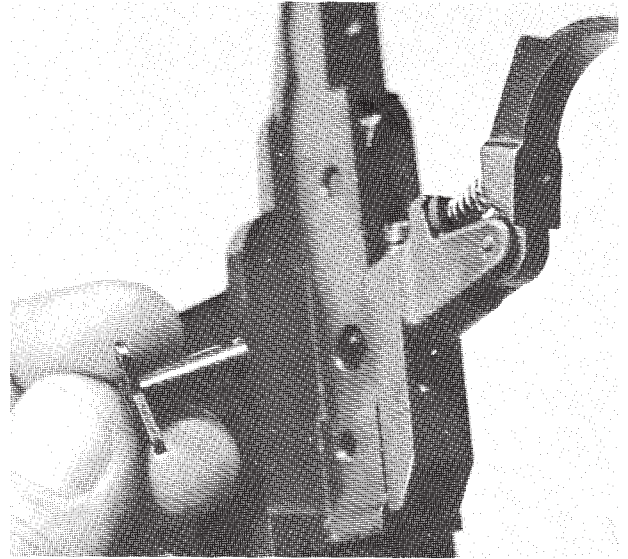


- 16.** Move the rear tip of the safety link out of its cross hole in the underside of the safety button, and unhook its forward end from the safety plate. The safety button can now be removed.

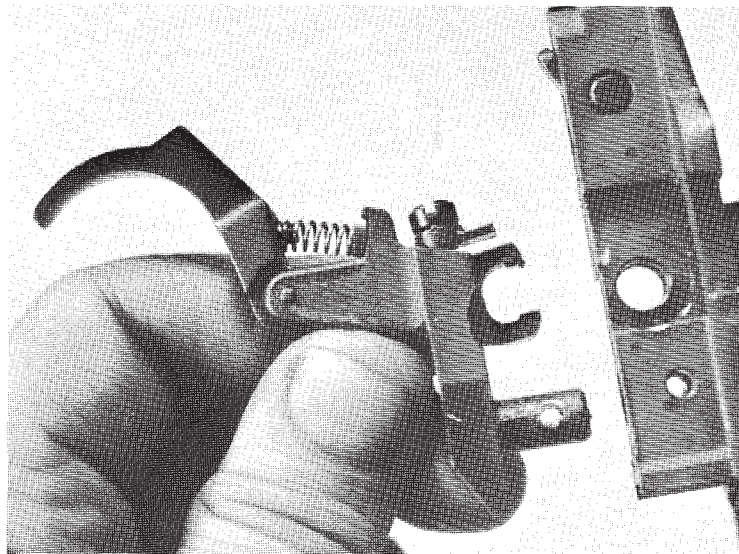


17. After the link rod is removed, push the safety plate toward the right, moving the right tip of its shaft slightly out of the right side of the housing. The safety bolt lock can then be slid off the shaft downward, then removed toward the right.

18. Remove the safety shaft and its attached plate toward the left.

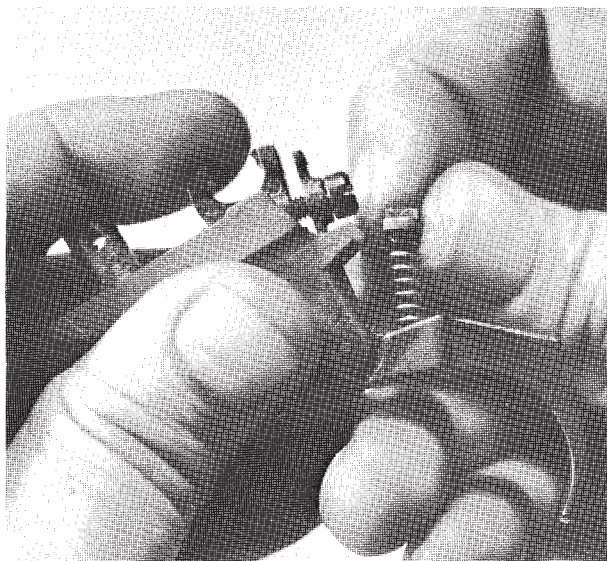


19. Drift out the trigger housing cross pin toward the left, using a roll pin punch. It is important that the ends of this pin are not deformed, as the safety positioning spring must be remounted inside the pin.

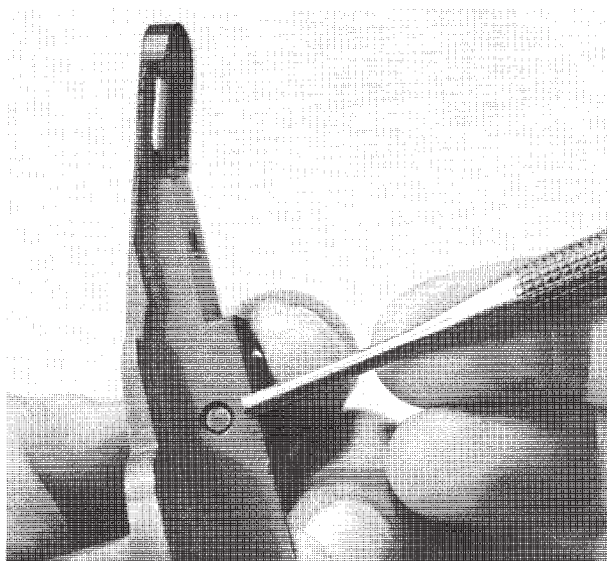
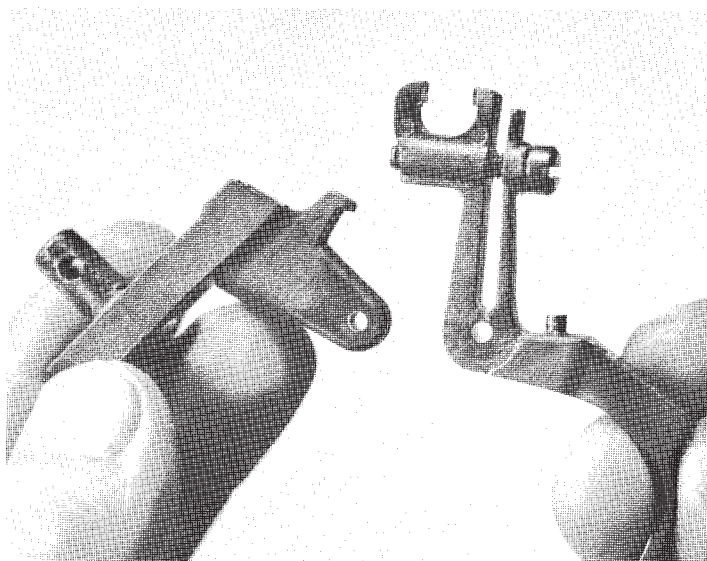


20. Remove the trigger housing downward.

- 21.** Move the trigger spring base out of its seat at the rear of the housing, and remove the spring toward the rear. **Caution:** *The spring is under tension.*



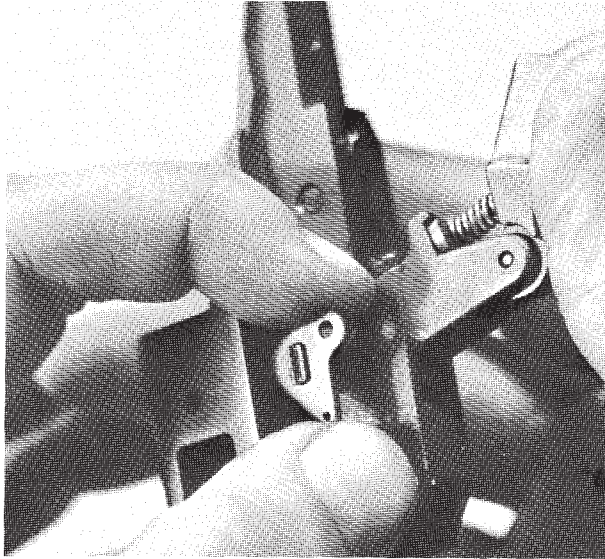
- 22.** Pushing out the trigger pin will release the trigger from the housing. The trigger adjustment screws should not be disturbed.



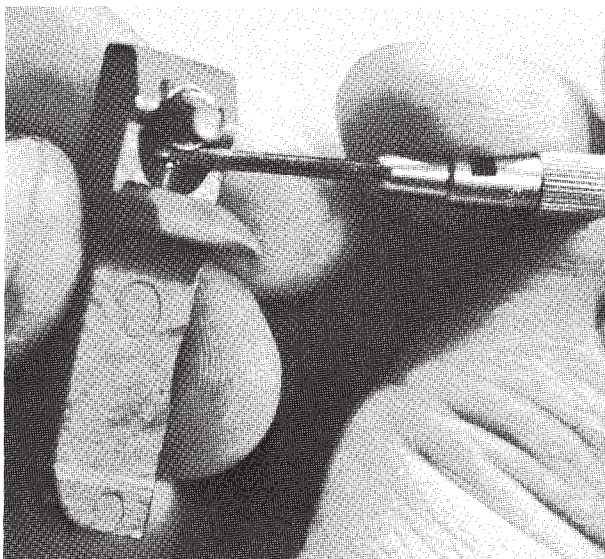
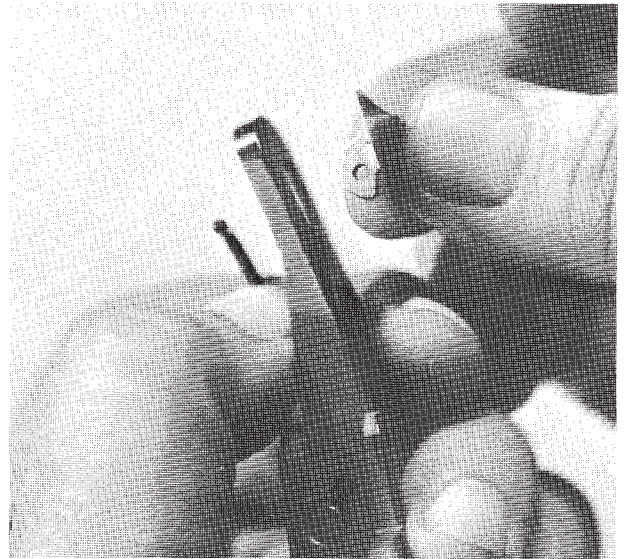
- 23.** Restrain the sear against its spring tension, and push out the sear pin toward the right side. Remove the sear and its spring downward.

Reassembly Tips:

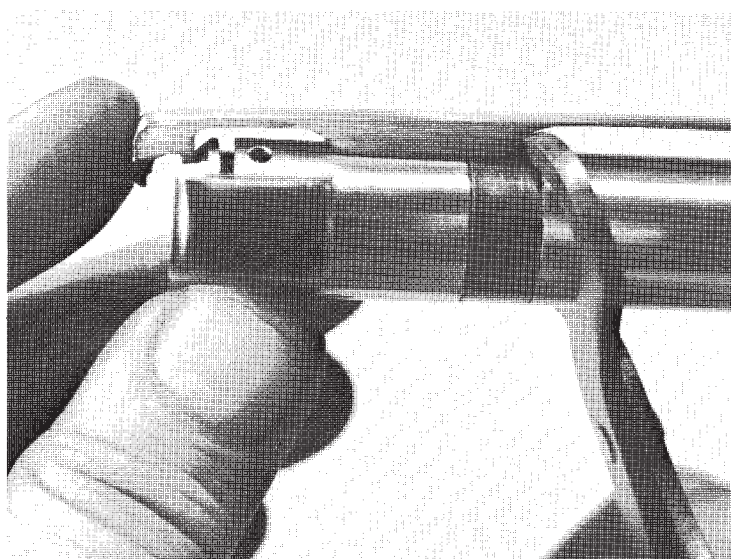
1. When replacing the safety shaft, the trigger must be pulled to clear the shaft tunnel for insertion.



2. When replacing the safety button, note that its longer slope goes toward the front.



3. Before replacing the bolt stop on the receiver, insert a small screwdriver to jump the plunger back onto the edge of the post screw. During installation, take care that the plunger doesn't slip off the edge.



4. When replacing the extractor on the bolt, use the Brownells extractor pliers to compress the mounting ring flanges while sliding the extractor onto them. After it is well started into the flanges, use the pliers to lift the underlug at the front of the extractor onto the front edge of the bolt. Take care to lift the front of the extractor no more than is absolutely necessary for clearance.



Ruger Model 96-44

Data:	Ruger Model 96-44
Origin:	United States
Manufacturer:	Sturm, Ruger & Company Newport, New Hampshire
Cartridge:	44 Magnum
Magazine capacity:	4 rounds
Overall length:	37-3/4 inches
Barrel length:	18-1/2 inches
Weight:	5.88 pounds

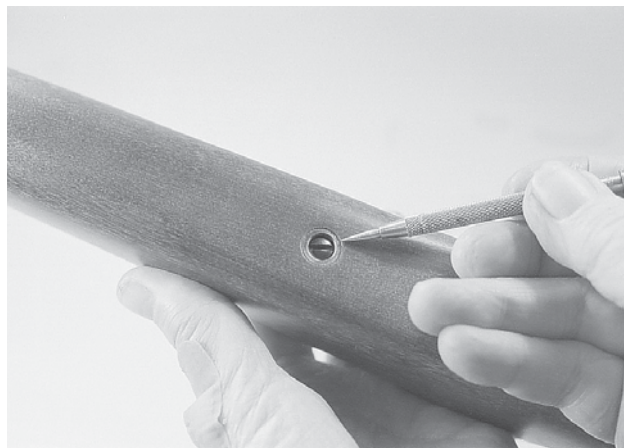
The model number reflects the year of its introduction, 1996. This was Ruger's first lever-action repeater, and it is an excellent design. There are also two rimfire versions, in 22 LR and 22 Magnum. A notable feature is an indicator that shows when the internal hammer is cocked.

Disassembly:

1. Remove the magazine, cycle the action to cock the internal hammer, and set the manual safety in on-safe position. Loosen the barrel band screw, and slide the band off toward the front for removal.



2. Loosen the action mounting screw until it drops free within its collar.



3. Tip the barrel and receiver unit upward at the front, and remove it from the stock.



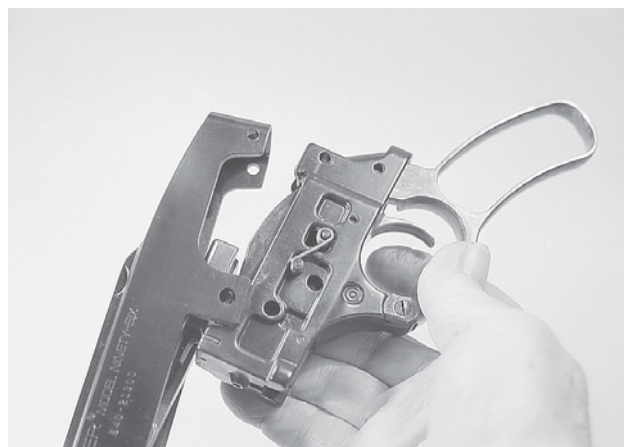
4. Push out the crosspin at the rear of the receiver.



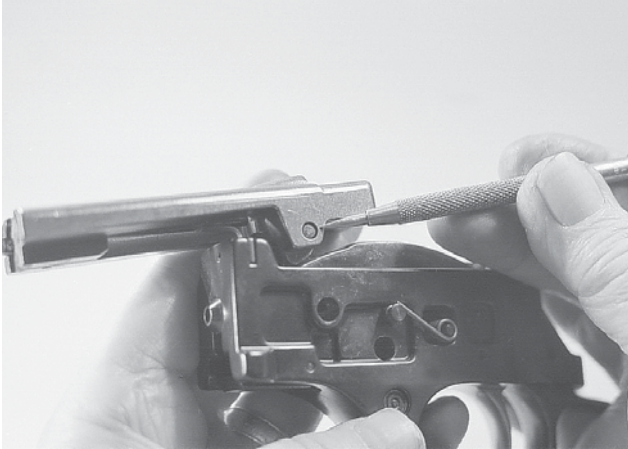
5. Push out the larger crosspin at the front.



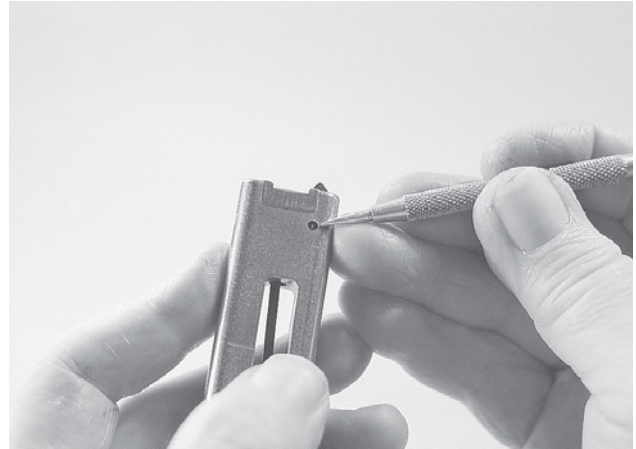
6. Remove the sub-frame and the attached bolt downward.



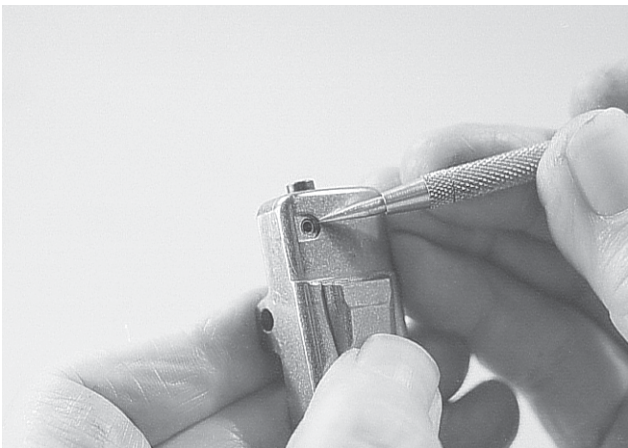
- 7.** Push out the bolt pin, and detach the bolt from the lever link.



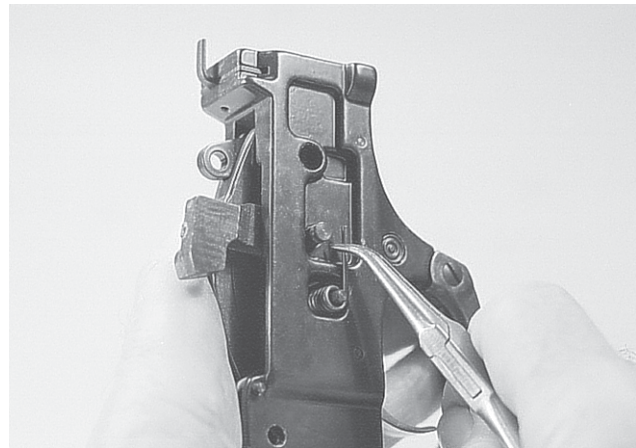
- 8.** Drifting out the vertical roll pin at the front of the bolt will release the extractor and its spring for removal. Control the parts as the drift is taken out.



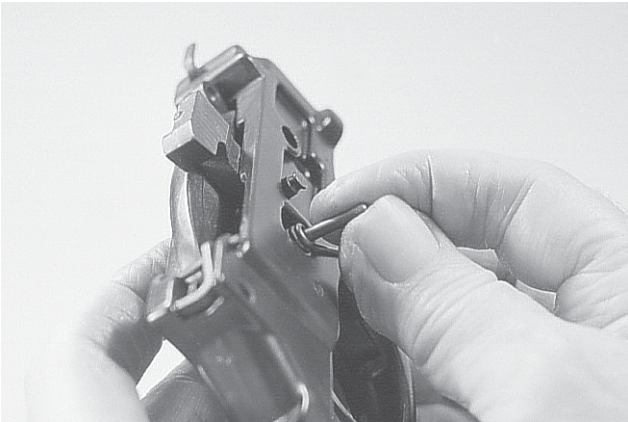
- 9.** The firing pin and its return spring are retained by a vertical roll pin at the rear of the bolt.



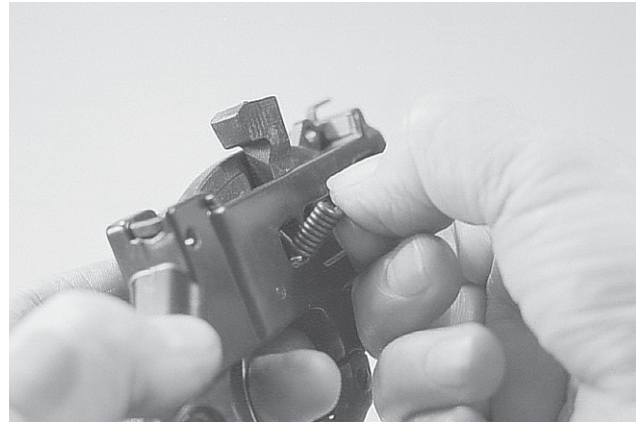
- 10.** Move the safety to off-safe, restrain the hammer, pull the trigger, and ease the hammer down to fired position. Unhook the outer arms of the hammer springs on each side from their grooves in the hammer pivot pin, and allow them to turn downward, relieving the tension.



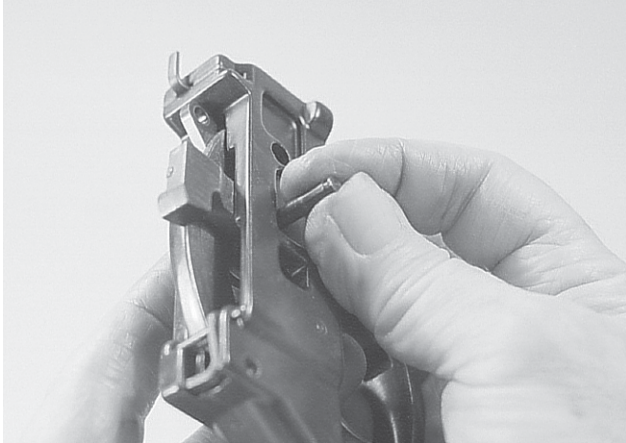
- 11.** Remove the crosspin from the hammer springs.



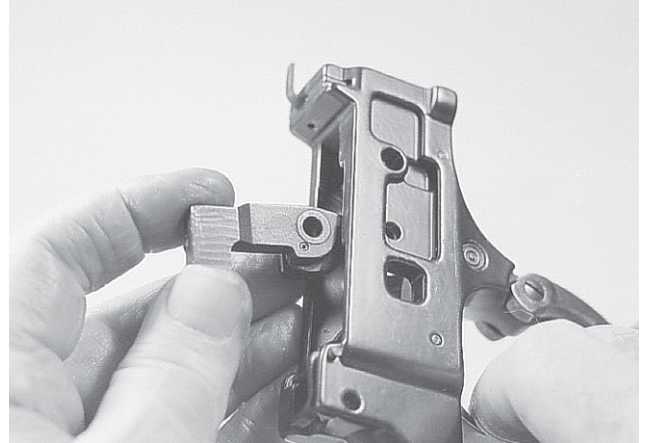
- 12.** Remove the hammer springs from each side. The shorter inner arms must be disengaged from the back of the hammer, and the springs must be turned for removal.



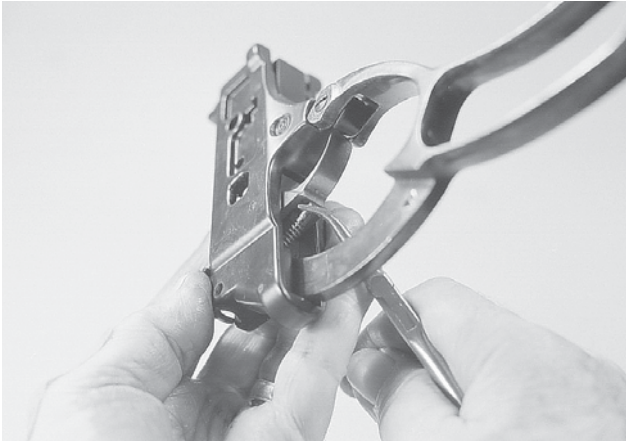
- 13.** Remove the hammer pivot pin toward either side.



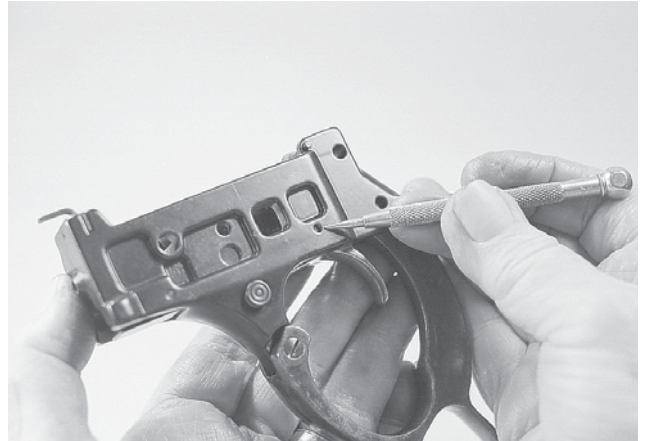
- 14.** Tip the hammer over toward the rear, open the lever, and remove the hammer upward. The small roll pin in the hammer is a bearing pin for the springs, and it does not have to be removed.



- 15.** Move the trigger forward, and take out the trigger plunger and spring.



- 16.** Push out the trigger crosspin toward the right.



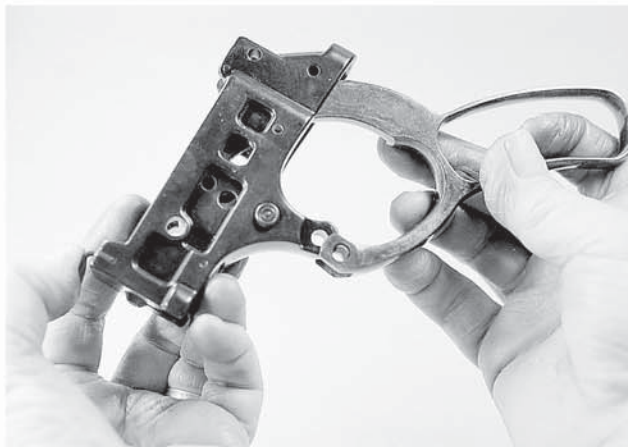
- 17.** Remove the trigger assembly downward.



- 18.** Pushing out the pivot-sleeve will allow removal of the sear and its spring from the trigger.



- 20.** Move the lever out downward.



- 19.** Removal of the cap screw and pivot from the lever will require screwdrivers of the proper size on both sides. After the cap screw is taken out, the pivot is easily removed.

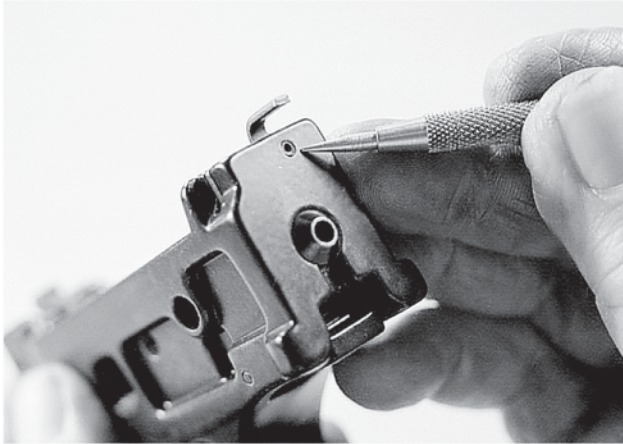


- 21.** If it is necessary to remove the bolt link from the top of the lever, note that its crosspin is splined on one side, and be sure it is driven out in that direction. If removal is not necessary for repair, the link is best left in place.

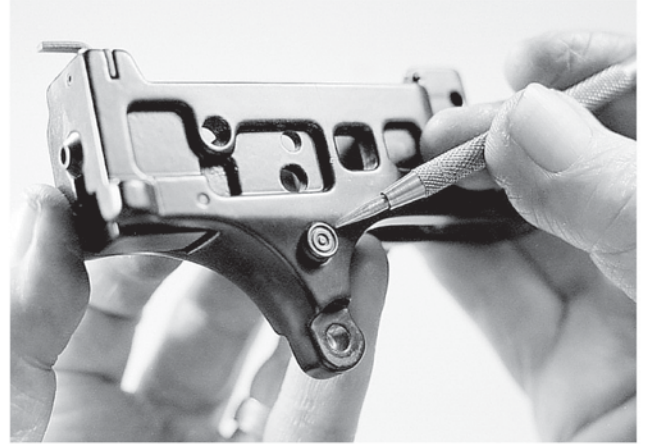


- 22.** The actuator lever that operates the cocked-hammer indicator is pivoted and retained on the rear of the sub-frame by a crosspin.

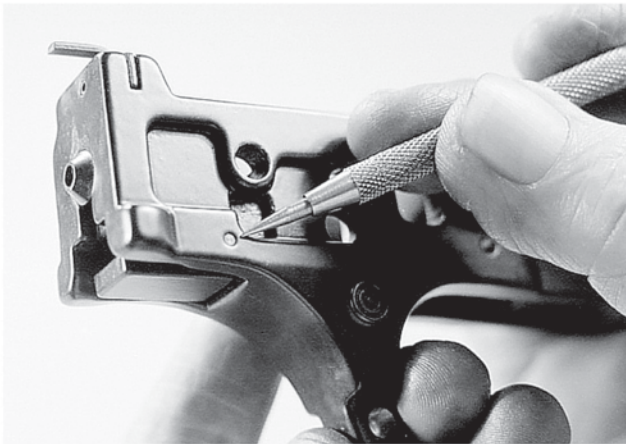
- 23.** The ejector is retained at the front of the sub-frame by a small roll pin.



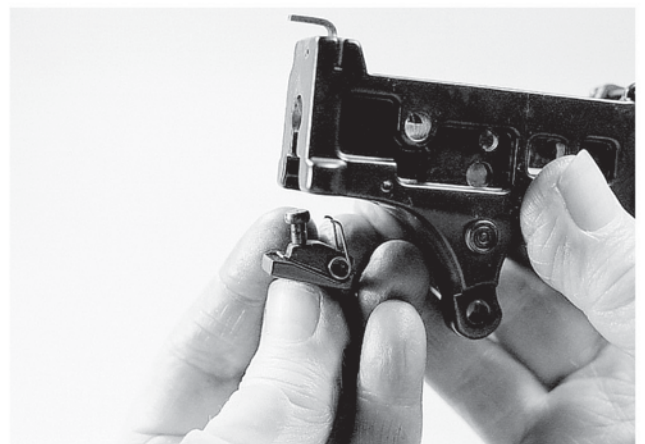
- 24.** The safety can be taken out by inserting a tool inside the sub-frame to turn it slightly, moving the detent notches away from the plunger and spring. **CAUTION:** The plunger and spring will be released. If removal is not necessary, leave the safety in place.



- 25.** Push out the magazine catch crosspin.



- 26.** Remove the catch lever downward. The spring is easily detached from the lever.



- 27.** Remove the magazine catch plunger.



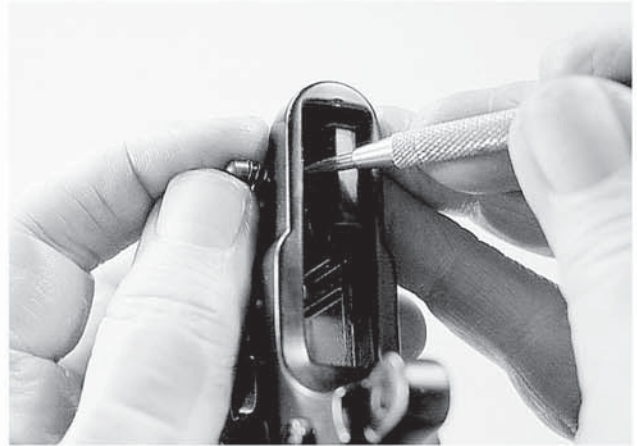
- 28.** The cocked-hammer indicator and its coil spring can be taken out by drifting the tiny roll pin toward the rear. In normal takedown, this system is best left in place. On the barrel and receiver unit, the front and rear sights are dovetail-mounted.



- 29.** By removing the Allen screw at the front, the rear panel of the magazine can be taken off for access to the internal parts. Re-assembly, however, may pose some problems for the amateur. Any problem with the magazine is best left to a professional.



- 30.** If necessary, the lever detent plunger and spring can be nudged outward with a small tool for removal.



Reassembly Tips:



- 1.** As the lever is re-installed, it will be necessary to insert a tool to depress the detent plunger and spring.



- 2.** The hammer springs must be inserted separately on each side. Note that the short inner arms must go beneath the crosspin in the recess in the back of the hammer. The spring pin can be used for manipulation, or a tool of the proper diameter. When the springs are in position, insert the spring pin before lifting the outer arms into their grooves in the hammer pivot.

Russian Mosin-Nagant Model 1891

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Russian Mosin-Nagant Model 1891 also apply to the following guns:

Chinese Type 53 Carbine

Finnish Model 27 Rifle

Finnish Model 28 Rifle

Finnish Model 39 Rifle

Finnish Model 91 Dragoon Rifle

Polish Model 91/98/25 Rifle

Russian Model 1891/30 Rifle

Russian Model 1944 Carbine

Finnish Model 24 Rifle

Finnish Model 27 Carbine

Finnish Model 28/30 Rifle

Finnish Model 91

Polish Model 1944 Carbine

Russian Model 1891 Dragoon Rifle

Russian Model 1938 Carbine

Data: Russian Mosin-Nagant
Model 1891

Origin: Russia

Manufacturer: Russian and Finnish
arsenals in later years,
earlier by contract in
France, Switzerland, and
by Remington and
Westinghouse in America

Cartridge: 7.62mm Russian

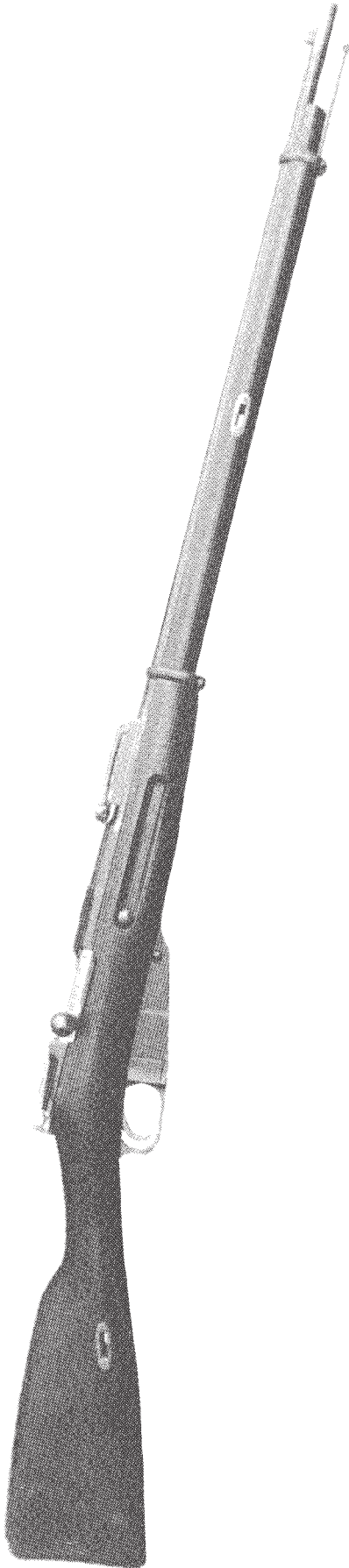
Magazine capacity: 5 rounds

Overall length: 51.3 inches
(carbine, 40 inches)

Barrel length: 31.6 inches
(carbine, 20 inches)

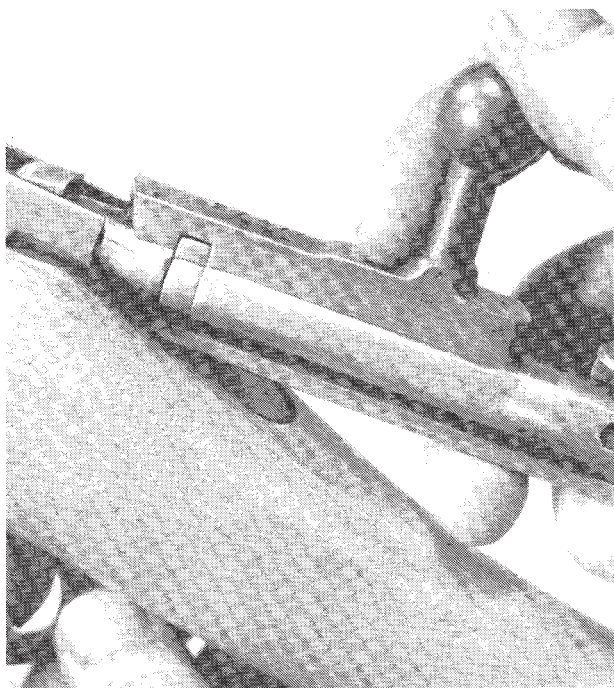
Weight: 9.63 pounds
(carbine, 7-1/2 pounds)

The Russian Model 1891 rifle was designed by Colonel Sergei Ivanovitch Mosin, then chief of the Imperial Arsenal at Tula. The magazine system was designed by Emile Nagant of Belgium, thus giving the gun its popular name, Mosin-Nagant. This rifle was used by the Russian military forces from 1891 through World War II. Late-manufacture guns are often rather crude, but the design is simple and the operation reliable. The basic design was also used as a service rifle by Finland, and these instructions will apply.

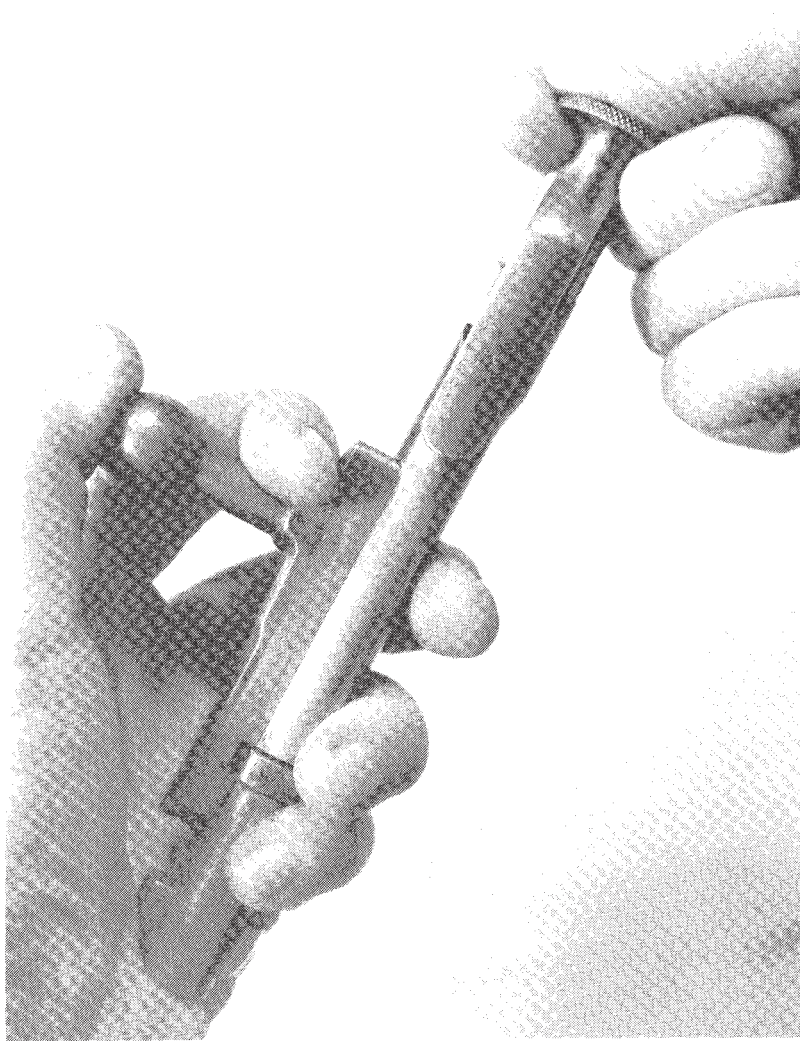


Disassembly:

1. Open the bolt, hold the trigger pulled to the rear, and remove the bolt from the rear of the receiver.



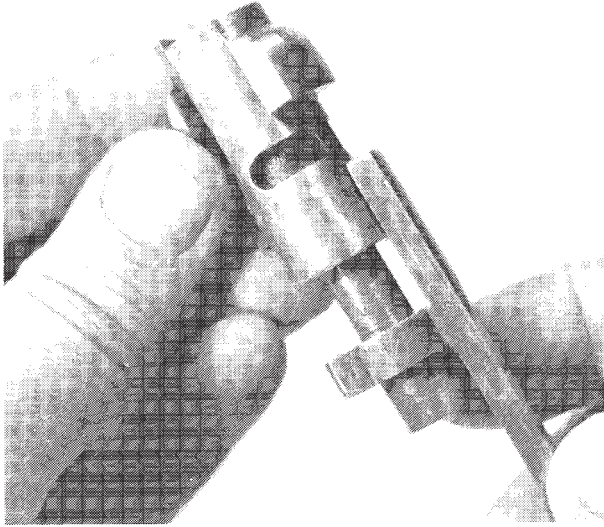
2. Grip the front of the bolt firmly, pull back the cocking knob, and turn it counter-clockwise (rear view) allowing the striker to move forward to the fired position.



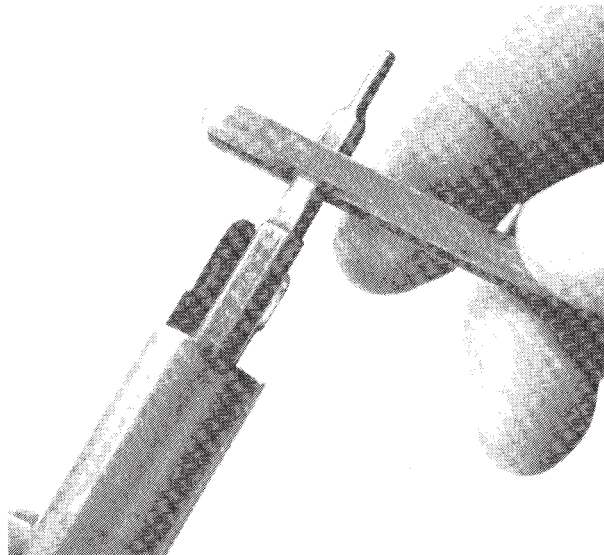
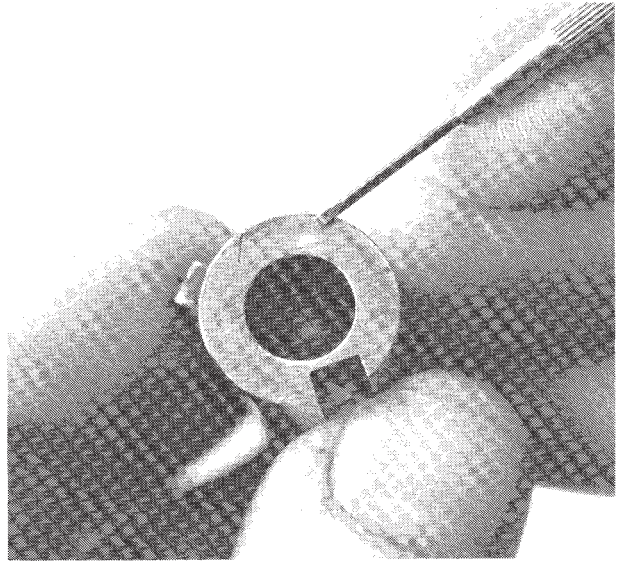
3. Slide the bolt connector and bolt head off toward the front.



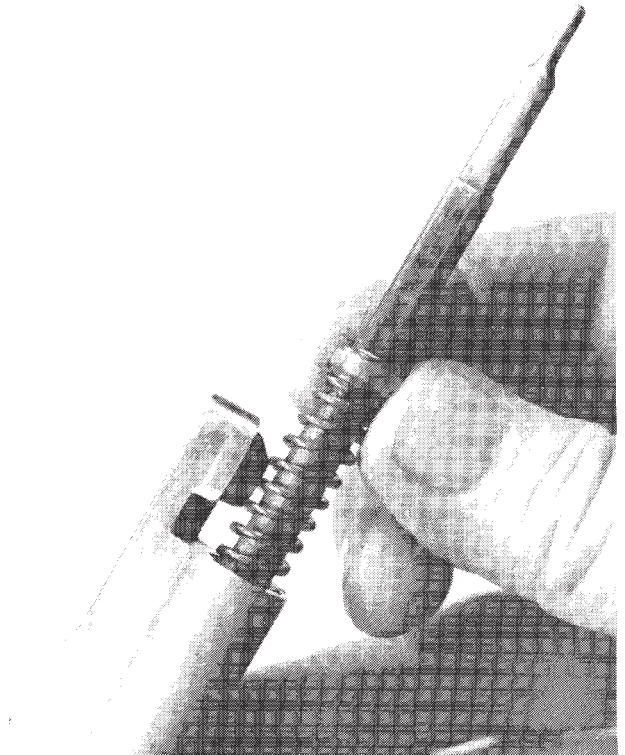
4. Turn the bolt head counter-clockwise (rear view) until it stops and remove it from the bolt connector toward the front.



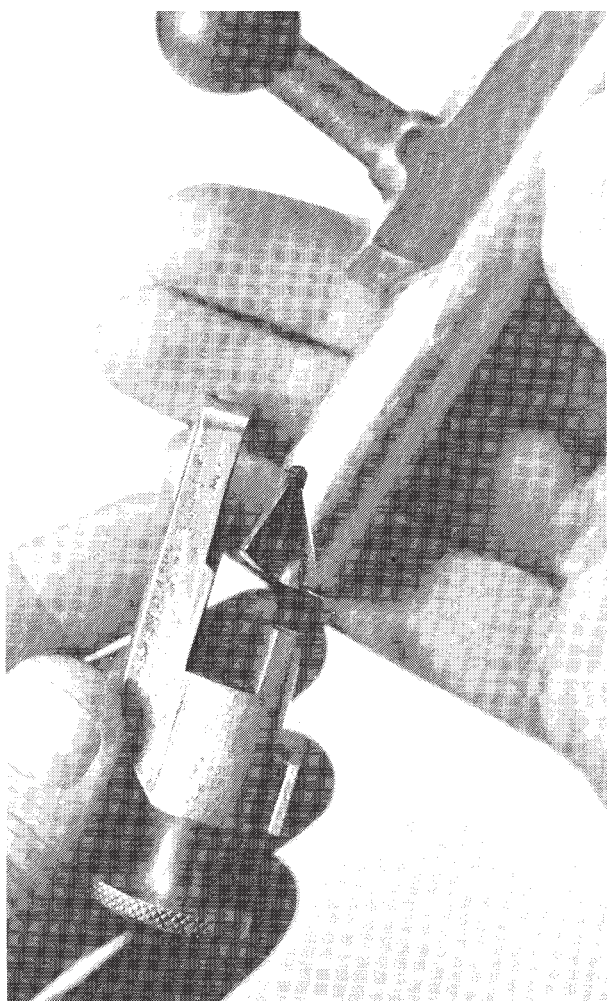
5. The extractor is dovetail-mounted in the bolt head, and should not be routinely removed. If necessary for repair, it is drifted out toward the rear. An unbroken extractor should be left in place.



6. The striker is threaded into the cocking piece at the rear, and the rear forked tip of the bolt connector guide bar can be used as a wrench on the flat sides of the firing pin to unscrew it. If the striker is very tight, though, use a small wrench or smooth parallel-jawed pliers, as extreme force could break the tip of the bar.
Caution: Control the parts, as the striker spring will be released when the threads are cleared.

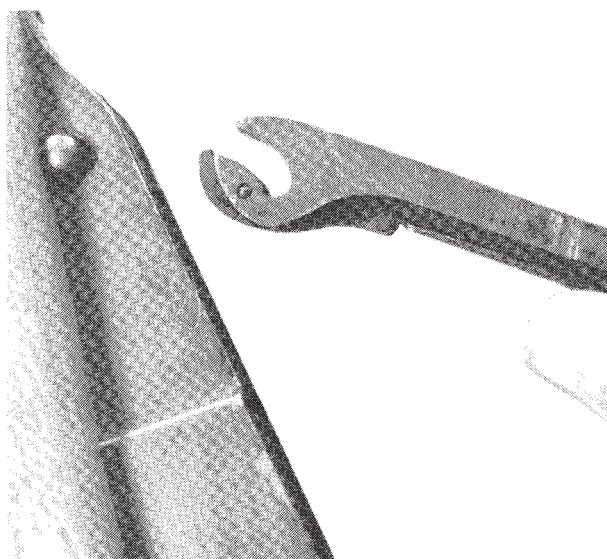
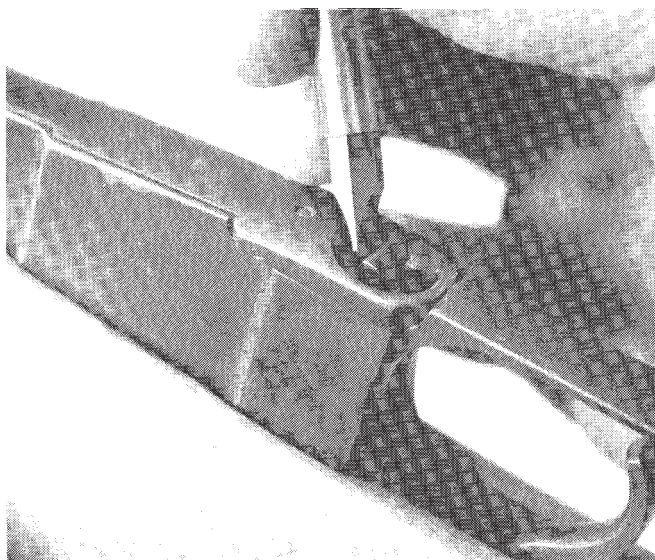


7. Remove the striker and its spring toward the front.

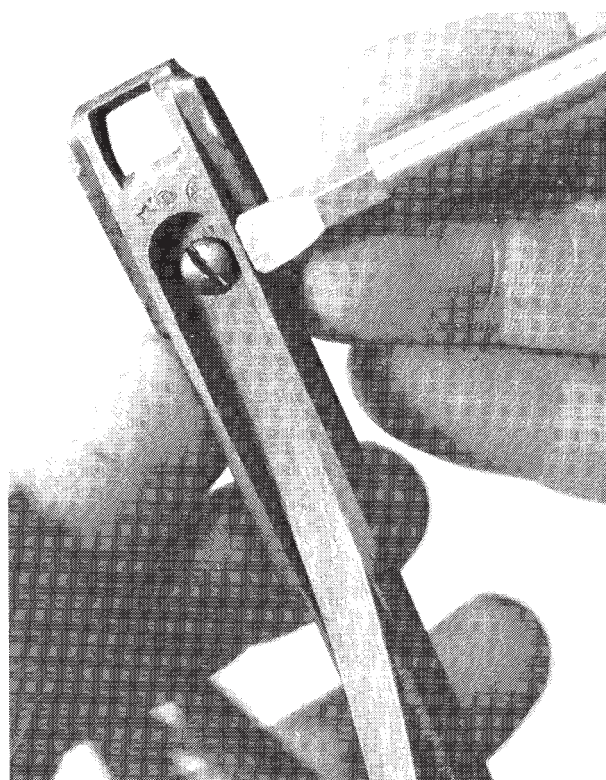


8. The cocking piece will be released at the rear of the bolt as the striker is unscrewed from the front.

9. With a fingertip or tool, push the magazine floorplate latch toward the rear, and open the floorplate.

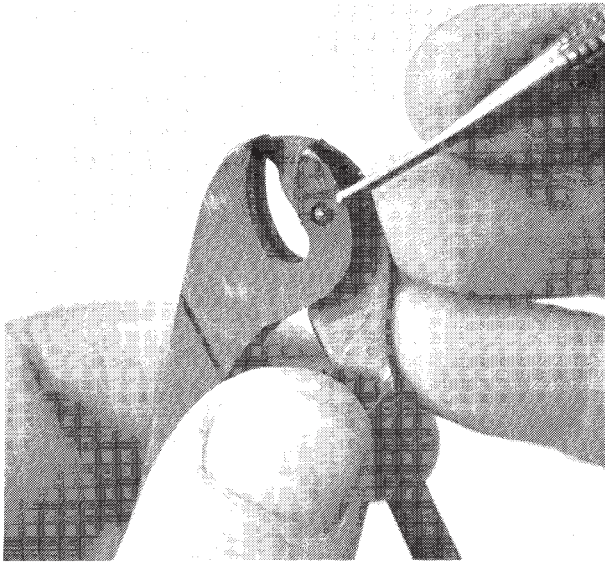


10. Squeeze the magazine follower down to the floorplate, and remove the floorplate assembly downward.

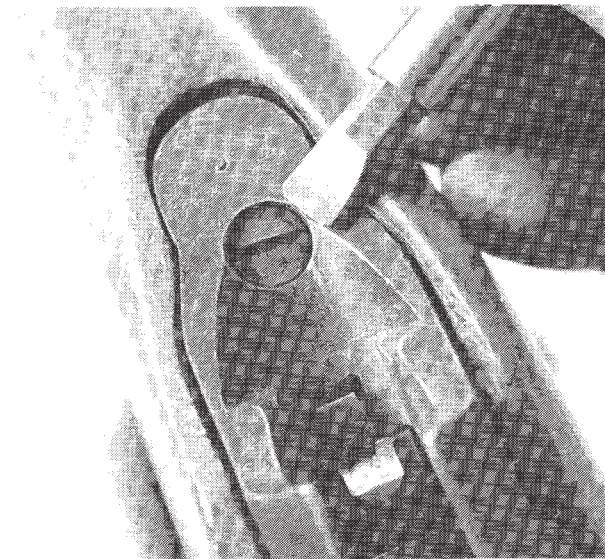
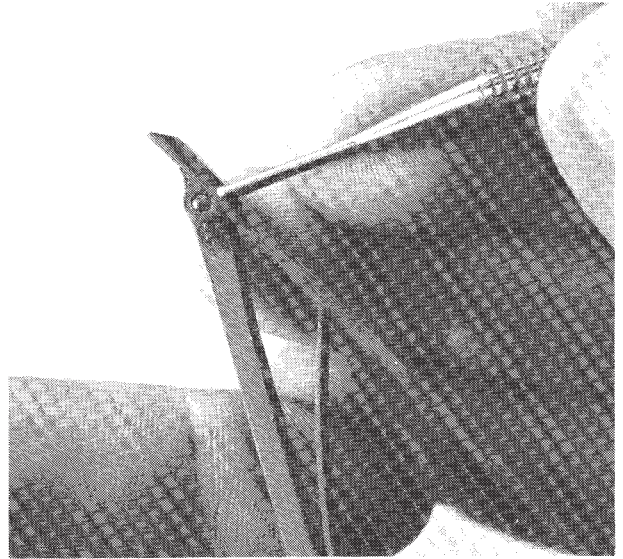


11. The magazine mainspring is retained inside the floorplate by a single screw.

- 12.** After the screw and spring are removed, drifting out the cross pin that pivots the follower arm will allow separation of the arm assembly from the floorplate.



- 13.** The follower is also cross-pinned to the arm, and the follower spring is easily detached by depressing its upper end from the underside of the follower and swinging the spring toward the side.

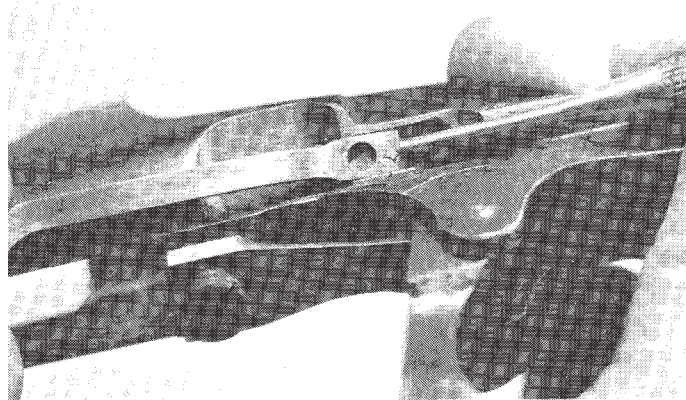
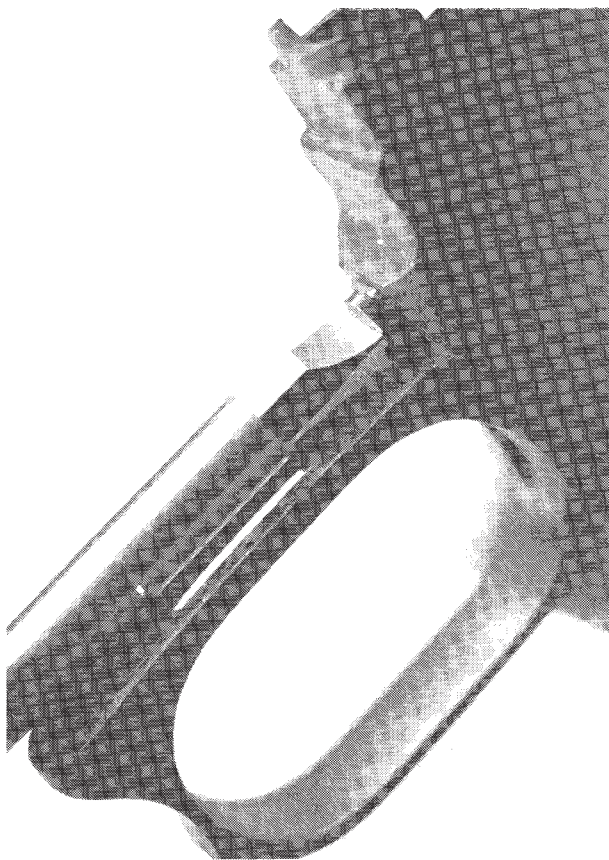


- 14.** If the rifle still has the full military stock, there will be two barrel bands, retained by spring catches on the right side of the stock. Slide the bands off forward, and remove the upper handguard. Next, remove the vertical screw on top, at the rear edge of the bolt track.



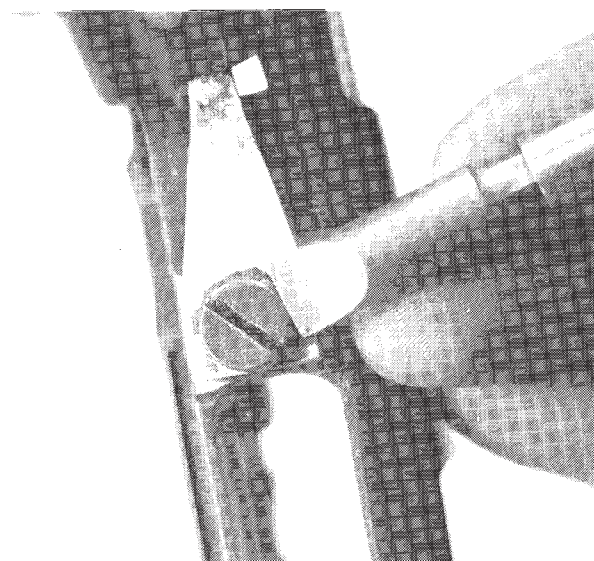
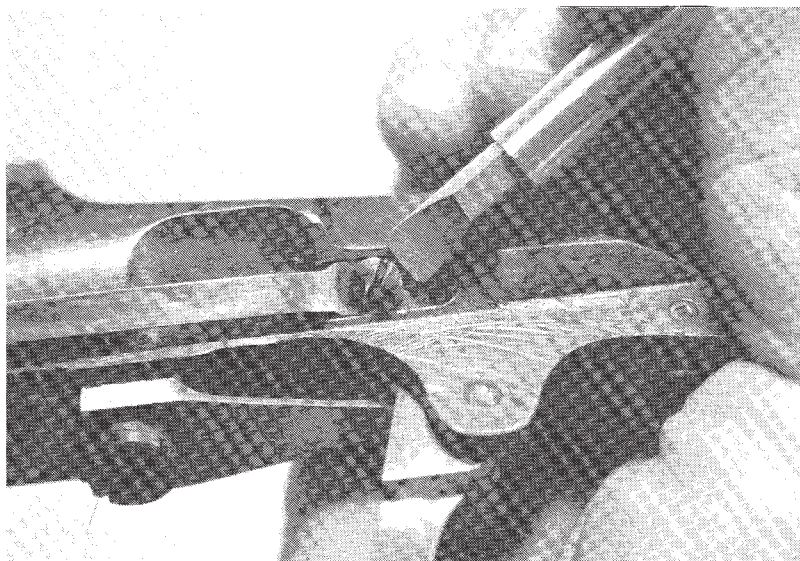
- 15.** Remove the vertical screw on the underside in the forward tip of the magazine housing. Remove the guard and magazine housing downward, and the action upward.

- 16.** The magazine floorplate latch is its own spring, and is retained on the rear of the magazine housing by a single screw. Remove the screw, and take off the latch downward.



- 18.** In addition to the screw, the ejector/interruptor is also dovetail-mounted, and must be drifted forward and sprung slightly outward at the front for removal.

- 17.** The combination ejector and feed interruptor is located on the left side of the receiver, and is secured by a screw at the rear. On some early guns, the ejector and interruptor/spring are two separate parts. Remove the screw, then check the next step.



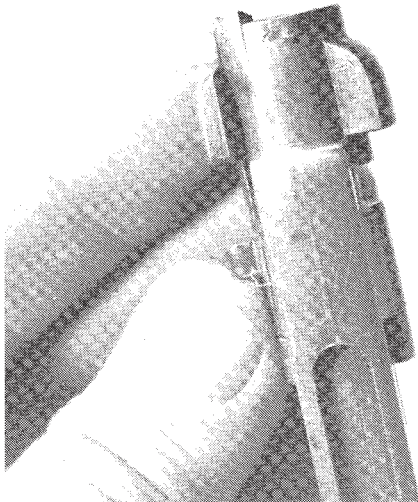
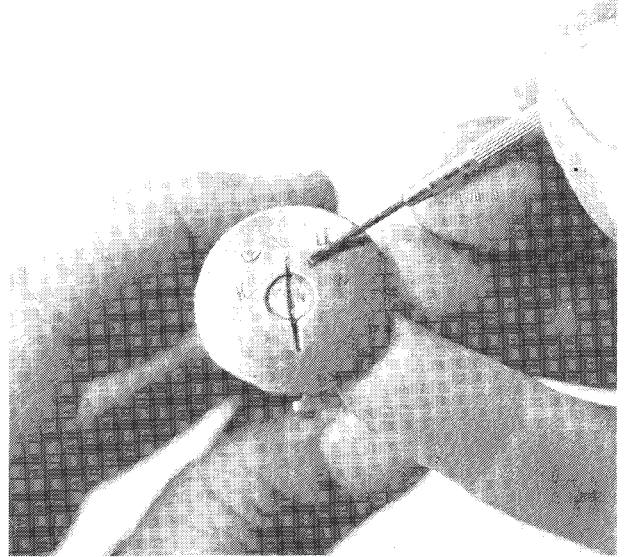
- 19.** The combination trigger spring and bolt stop is retained on the underside of the receiver by a large vertical screw. Remove the screw. The part will be loose, but is not removed at this time.

- 20.** Drift out the trigger cross pin, and remove the trigger and bolt stop/spring downward.

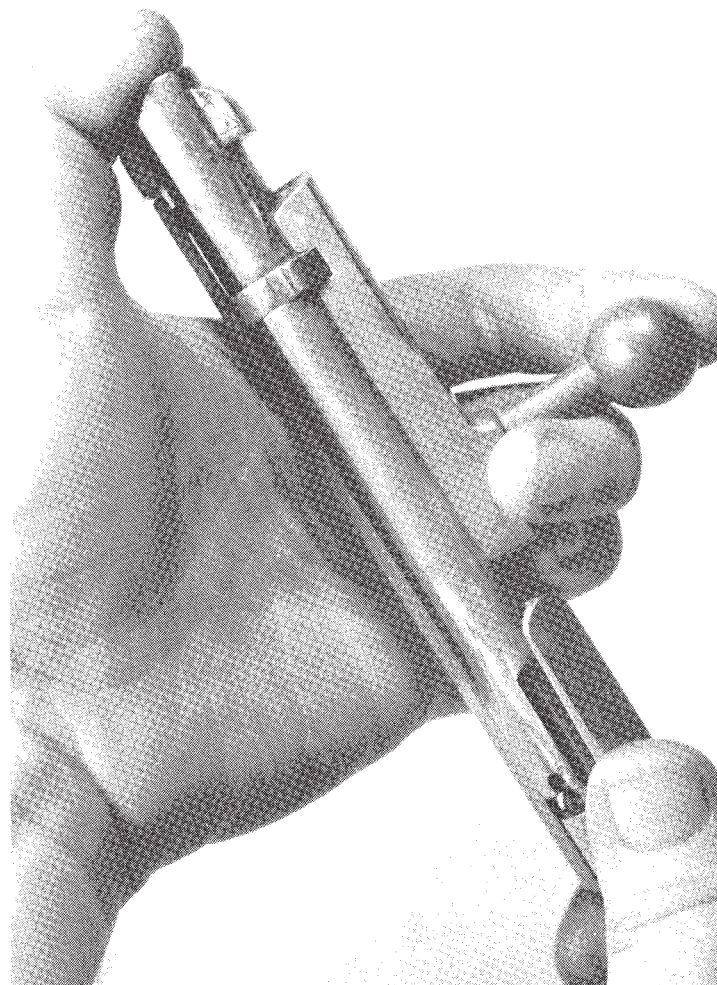


Reassembly Tips:

- 1.** When turning the striker back into the cocking piece, turn it until snug, but do not over-tighten it. If necessary, back it off until the groove in the rear tip of the striker shaft aligns with the groove in the rear face of the cocking knob, as shown.



- 2.** After the bolt head is installed on the connector, it must be turned to the position shown before the bolt head and connector are put back on the bolt.
- 3.** When replacing the connector and bolt head on the bolt, keep the bolt head pushed toward the rear, as shown, while turning the cocking knob to bring the lug on the connector back into its recess. When this movement is completed, the bolt will be cocked, and ready for reinsertion in the receiver.





Russian SKS (Simonov)

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Russian SKS (Simonov) also apply to the following guns:

Chinese Type 56

Yugoslavian Model 59-66

Data: Russian SKS (Simonov)

Origin: Russia

Manufacturer: Russian arsenals, and
factories in China and
other satellite nations

Cartridges: 7.62x39mm Russian

Magazine capacity: 10 rounds

Overall length: 40.2 inches

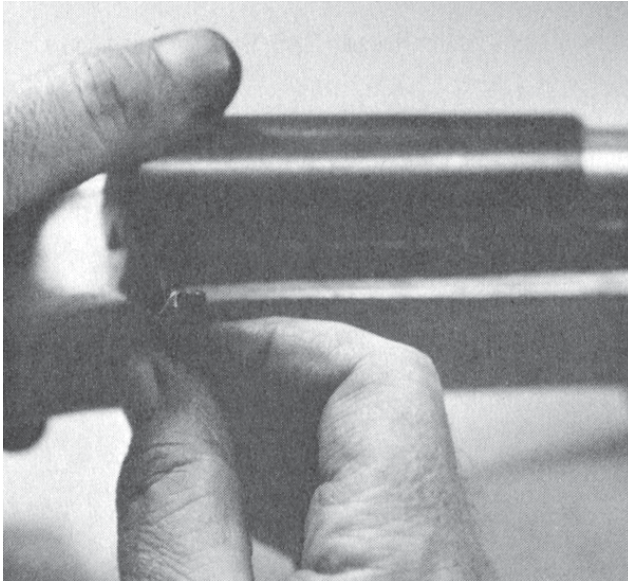
Barrel length: 20.47 inches

Weight: 8-1/2 pounds

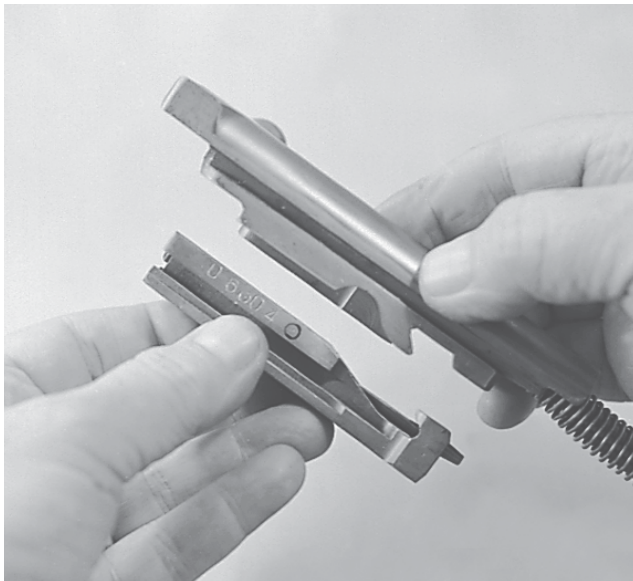
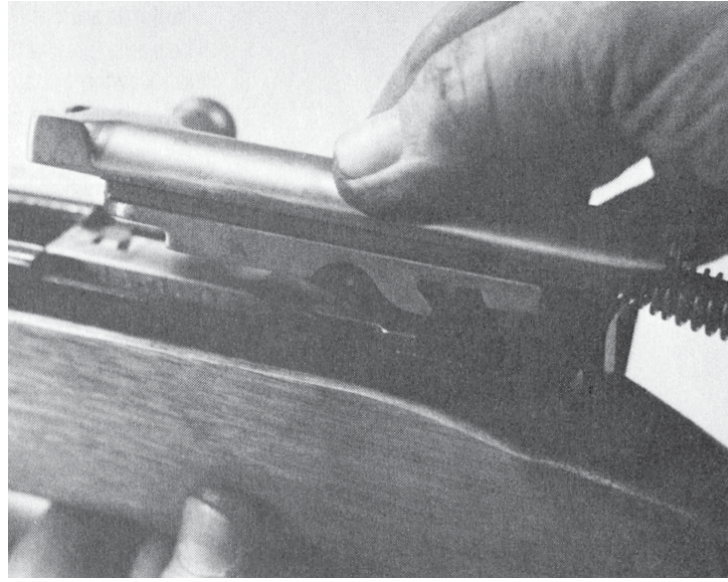
Introduced in 1945, the Samozaryadnyi Karabin Simonova (SKS) was the first rifle chambered for the then-new 7.62mm “short” cartridge. The gun was made in large quantity, and it has been used at some time by every community country in the world. Versions of it have been made in China, Yugoslavia, and elsewhere. While some of these variations may be different in small details, the mechanism is the same, and the instructions will apply.

Disassembly:

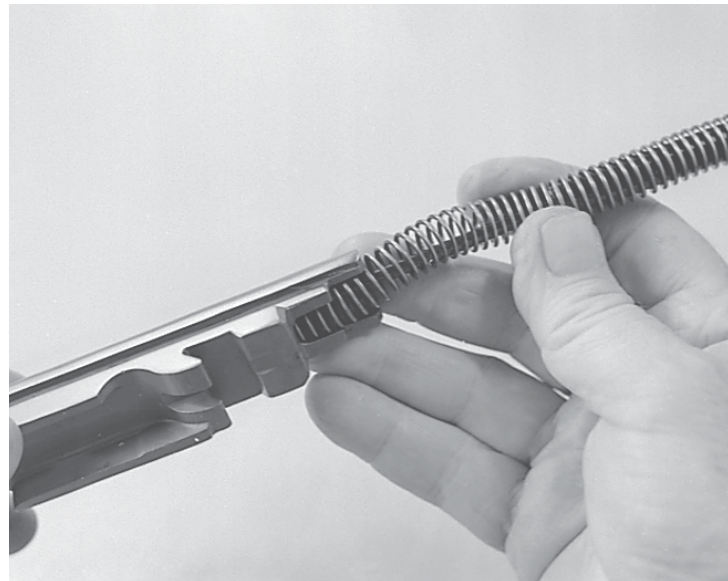
1. Cycle the action to cock the internal hammer. Turn the takedown latch up to vertical position, and pull it out toward the right until it stops. Take off the receiver cover toward the rear.



2. Move the bolt and recoil spring assembly back until it stops, and lift it off the receiver.



3. The bolt will probably be left in the receiver when the carrier and recoil spring unit are removed. If not, the bolt is simply lifted out of the carrier.

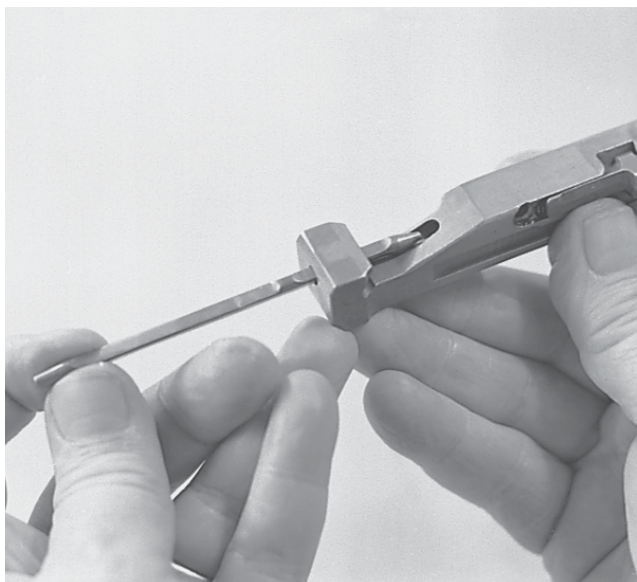
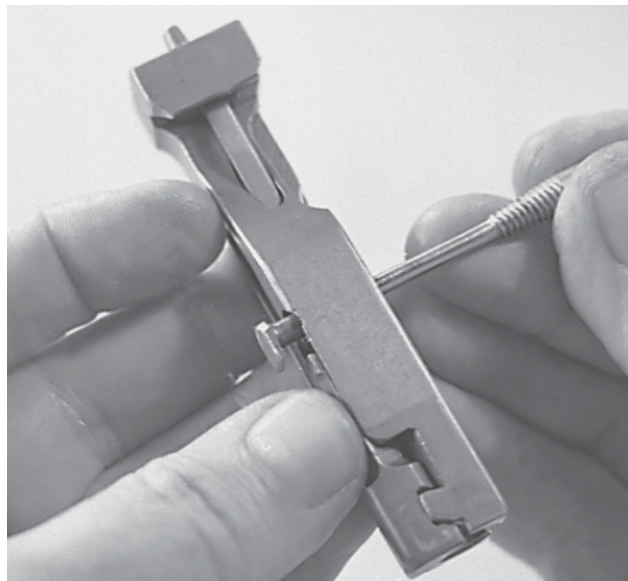


4. The captive recoil spring assembly is removed from the bolt carrier toward the rear.

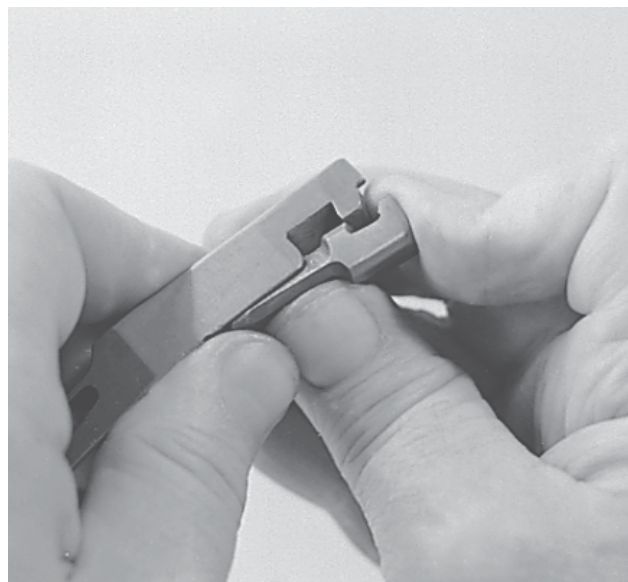
- 5.** If it is necessary to dismantle the spring assembly, rest the rear tip on a firm surface, pull back the spring at the front, and move the collar downward until it clears the button and take it off to the side. **Caution:** *Control the spring.*



- 6.** Push out the firing pin retainer toward the right.



- 7.** Remove the firing pin toward the rear.

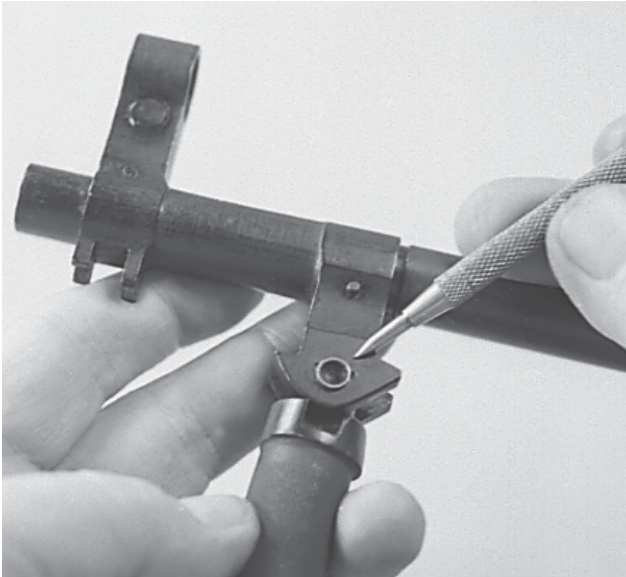
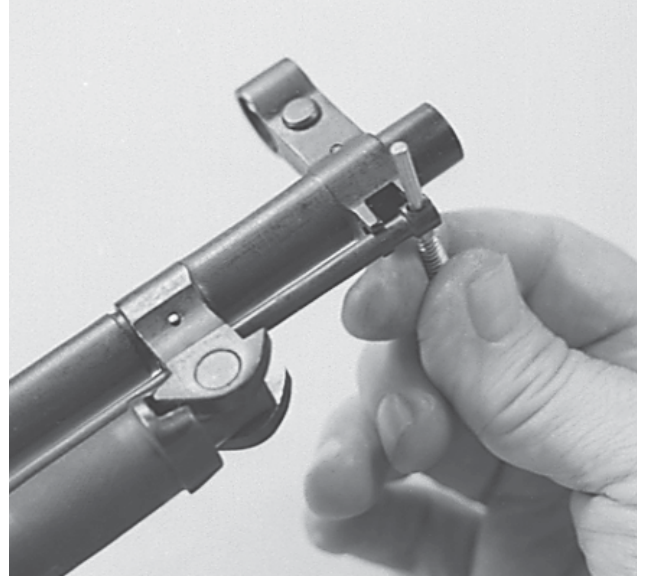


- 8.** Push the extractor toward the rear, and tip it out toward the right for removal. The spring is mounted inside the rear of the extractor, and it will come off with it.

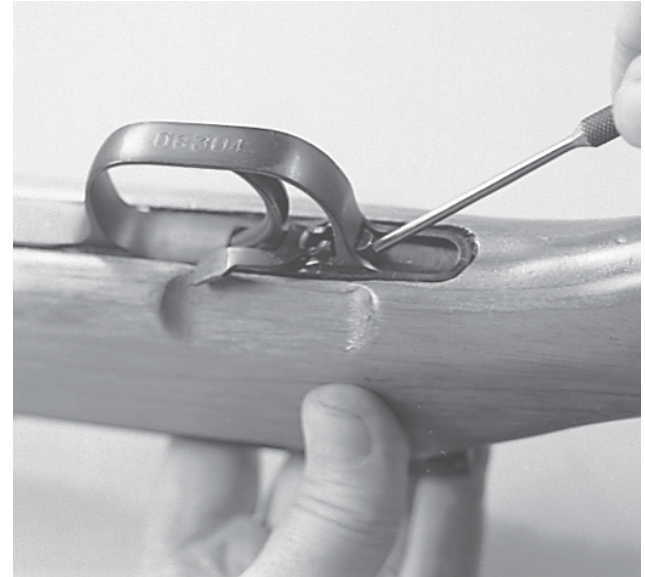
- 9.** The takedown latch is retained by an internal cross pin. In normal takedown, it is best left in place. To get the latch out of the way for the remainder of takedown, push it back into its locked position.



- 10.** Insert a drift through the hole in the head of the cleaning rod. Lift it out of its locking recess, and remove it toward the front.

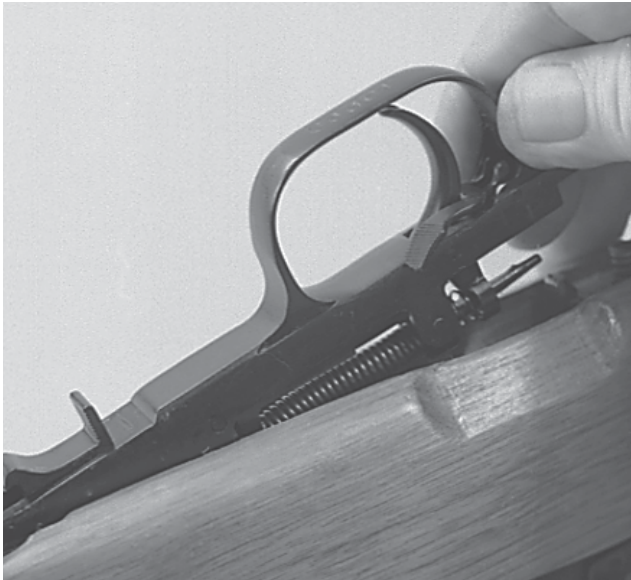


- 11.** The bayonet hinge is often riveted in place. If removal is not necessary for repair, it is best left in place.

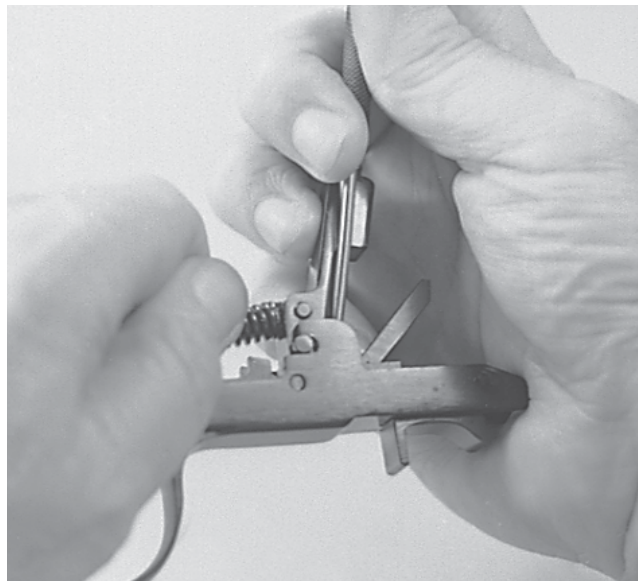
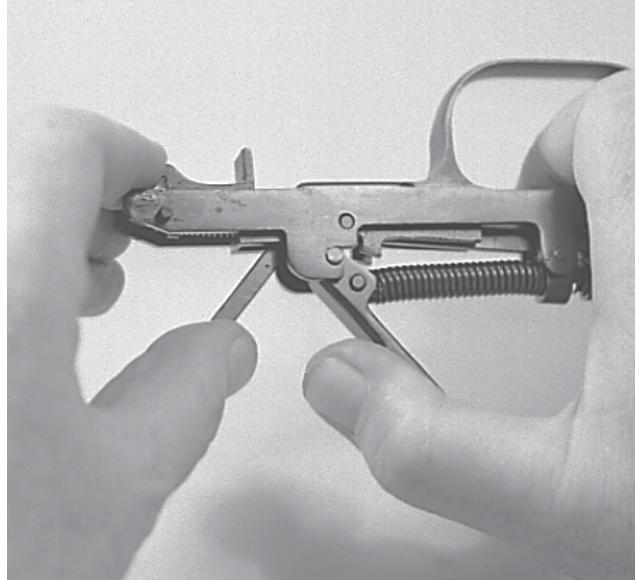


- 12.** Be sure the internal hammer is in cocked position, and set the manual safety in on-safe position. Use a bullet rip or a suitable tool to push the guard latch forward.

- 13.** When the latch releases, the guard will jump out slightly. Tip the guard away from the stock, move it toward the rear, and remove the guard unit.



- 14.** Release the safety. Depress the disconnecter, at the front of the hammer, about half way. Control the hammer, and pull the trigger. Ease the hammer down to fired position. **Caution:** *The hammer spring is powerful.*

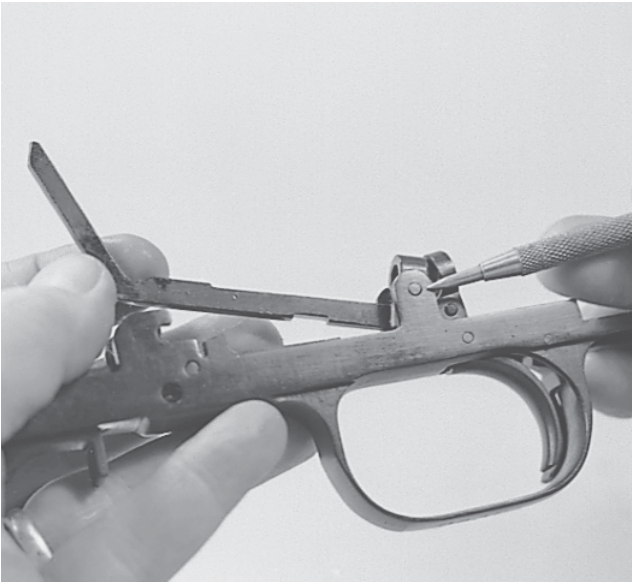


- 15.** Insert a sturdy drift in front of the hammer, and lever it toward the rear until its pivot studs are clear of the hooks on the unit. **Caution:** *Keep a good grip on the hammer.* When it is clear, take off the hammer and its spring and guide. Another method is to grip the unit in a padded vise and use a bar of metal to apply pressure to the front of the hammer.

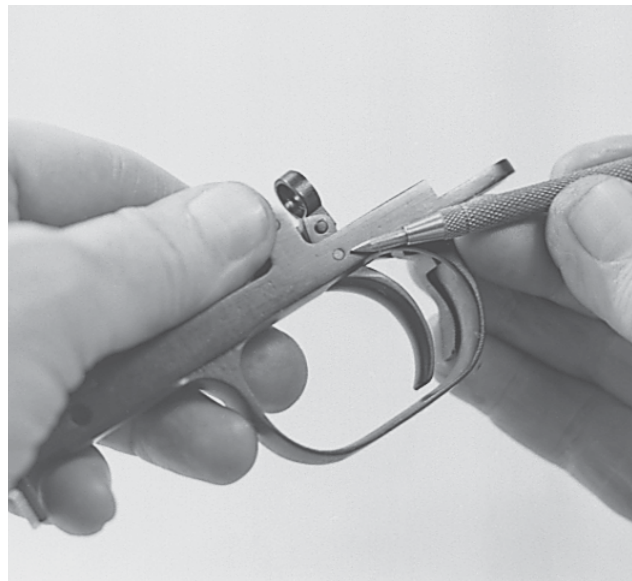
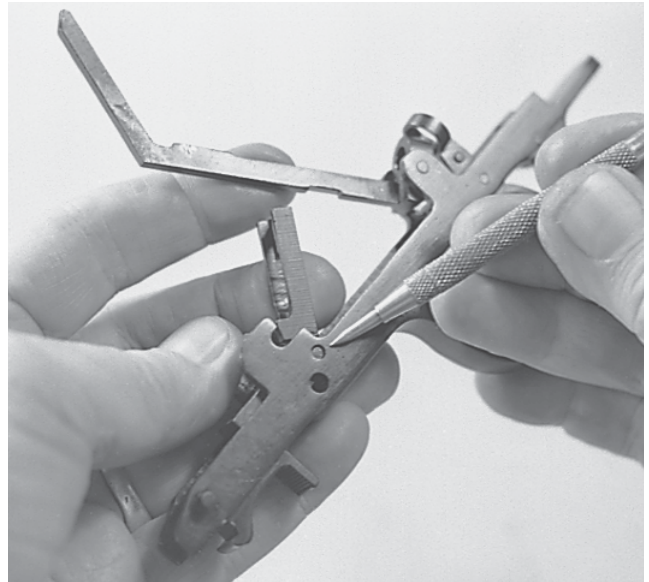


- 16.** The trigger spring can be removed by gripping a forward coil with sharp-nosed pliers and compressing it slightly rearward, then tipping it out.

- 17.** Pushing out the cross pin will free the disconnecter for removal upward.



- 18.** Removal of this cross pin will allow the rebound disconnecter to be taken out.

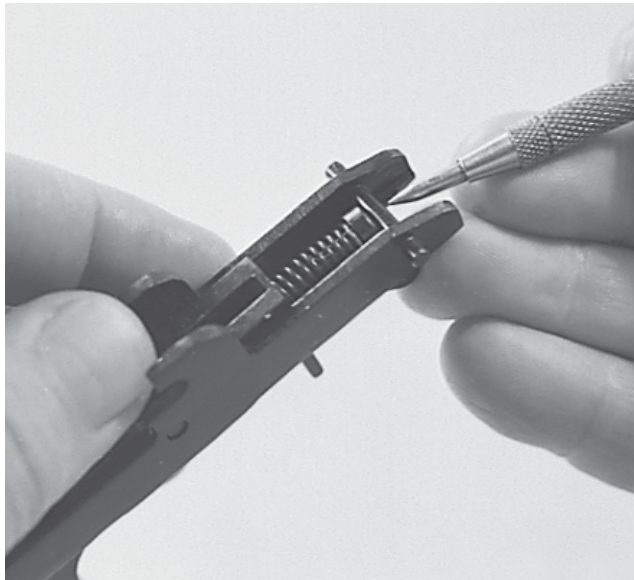


- 19.** Drift out the trigger cross pin, and take out the trigger upward. The safety spring will also be freed for removal.

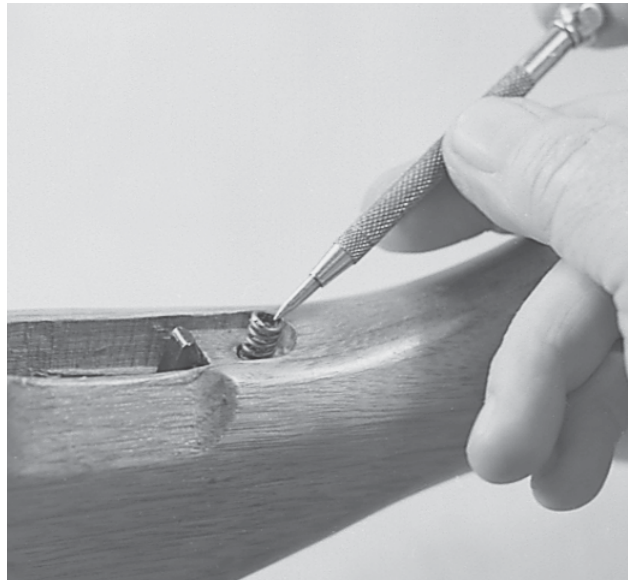


- 20.** Drift out the safety-lever pin, and remove the safety.

- 21.** This cross pin at the front of the trigger guard assembly retains the magazine catch, the combination spring, and the sear.



- 22.** The trigger guard spring can be lifted out of its well in the stock.

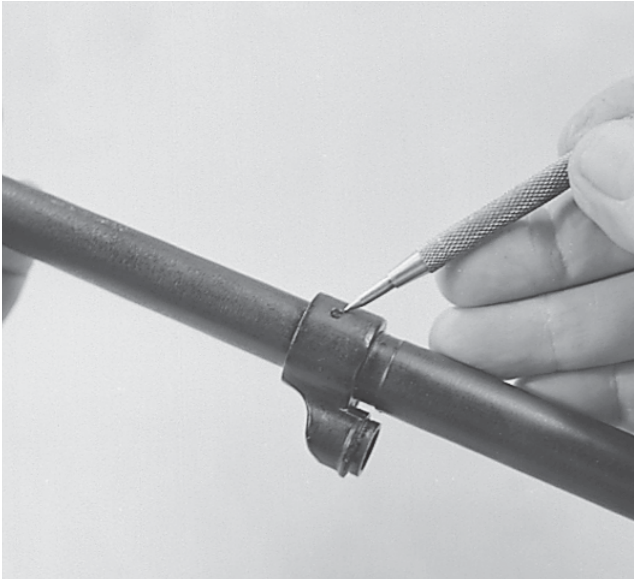


- 23.** With a bullet tip or a non-marring tool, turn the handguard latch upward until it is stopped by its lower stud in the track. Lift the handguard and gas cylinder assembly at the rear, and remove it.



- 24.** Remove the gas piston from the cylinder.

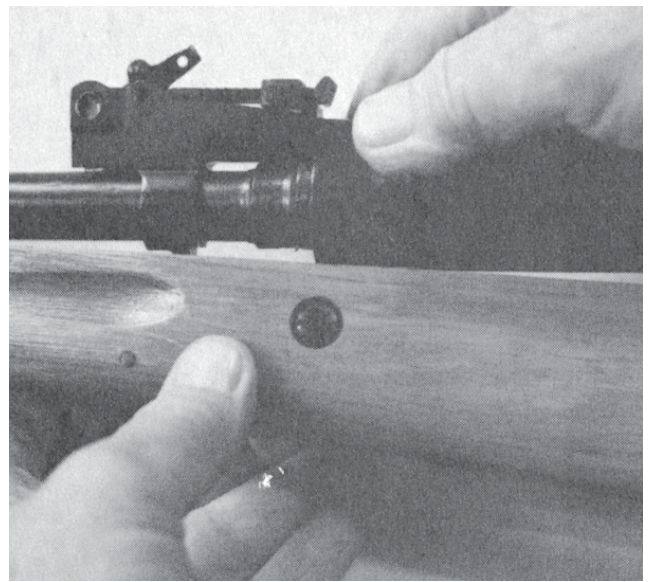
- 25.** The gas port unit is retained on the barrel by a cross pin. In normal takedown, it is left in place.



- 26.** Drift out the stock end cap cross pin. Use a non-marring tool to nudge the end cap slightly forward.

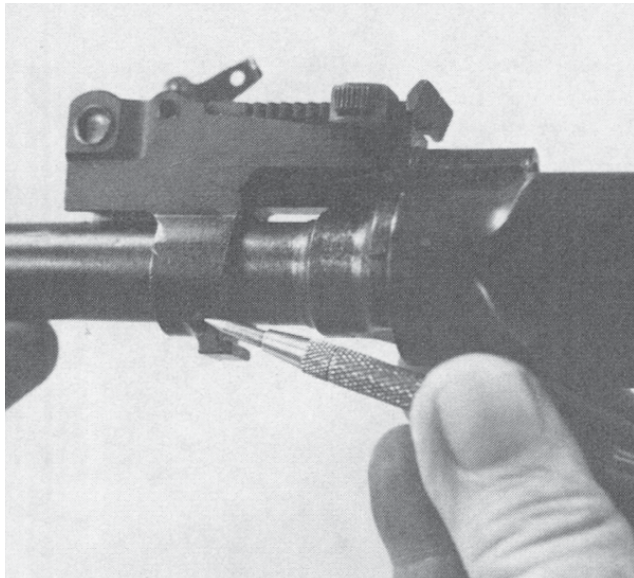


- 27.** Grip the magazine assembly, and pull it rearward and downward for removal.

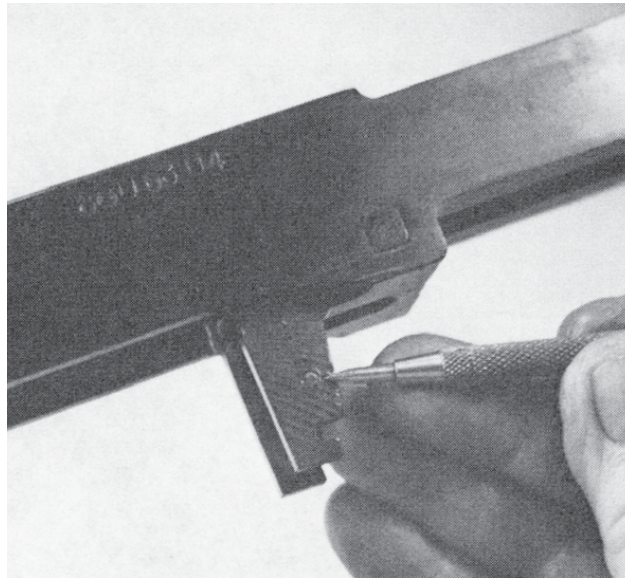


- 28.** Remove the action from the stock.

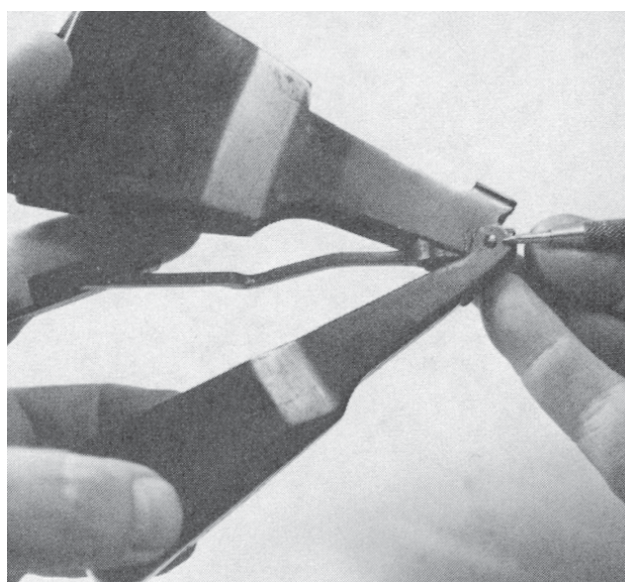
- 29.** The rear sight assembly is retained on the barrel by a cross pin, and is driven off toward the front. In normal takedown, the unit is left in place.



- 30.** Drifting out this cross pin will allow removal of the bolt hold-open latch and its coil spring downward.



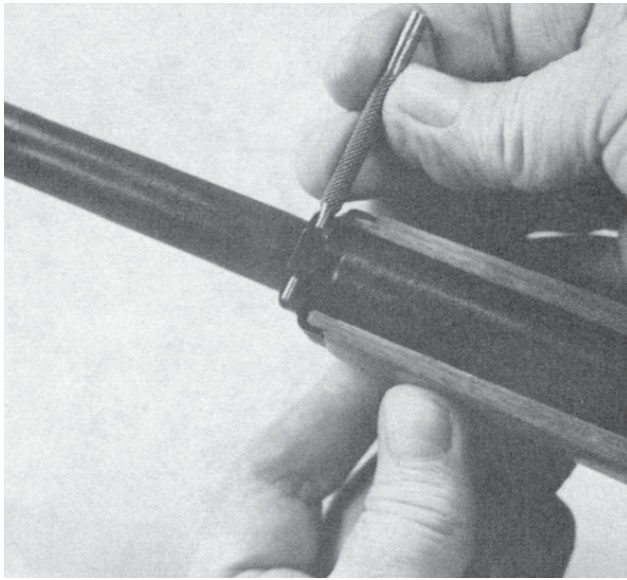
- 31.** The trigger guard latch, which is its own spring, is retained by a cross pin. After removal of the pin, the latch is driven out downward.



- 32.** The magazine, the follower and its spring, and the magazine cover are joined by a cross pin at the front. The pin is riveted on both sides, and removal should be only for repair.

Reassembly Tips:

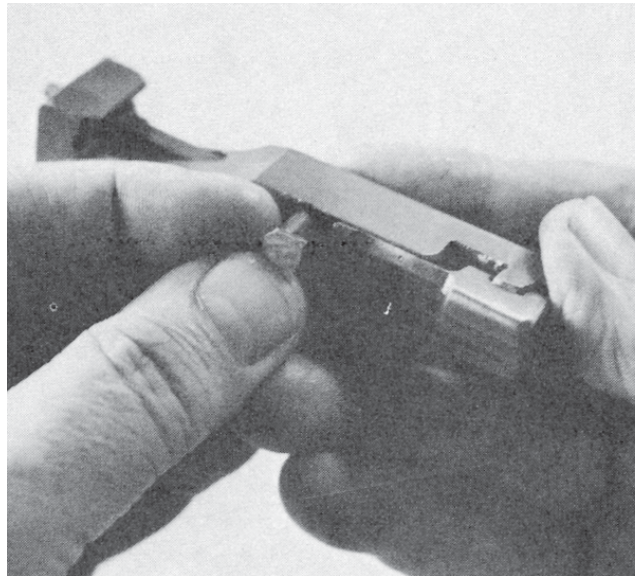
1. When the stock end piece has been nudged back into position, insert a drift to align the hole with the barrel groove.



2. For those who have disassembled the trigger group, here is a view of that unit with all of the parts properly installed.



3. When replacing the trigger group in the gun, extremely sharp shoulders at the rear of the sub-frame may cause a seating problem. These can be easily beveled, as shown, with a file. Note: For installation of the trigger group, the manual safety must be in on-safe position. Rest the top of the receiver on a firm surface as the guard unit is pressed into place.



4. When replacing the firing pin in the bolt, be sure the retaining shoulder is on top. Also, be sure the retainer is oriented to fit into its recess on the right side.

Sako Forester

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Sako Forester also apply to the following guns:

Sako Finnbear
Sako Model 72

Sako Vixen

Data: Sako Forester

Origin: Finland

Manufacturer: Oy Sako, A.B., Riihimäki

Cartridges: 22-250, 243, 308

Magazine Capacity: 5 rounds

Overall length: 42 inches

Barrel length: 23 inches

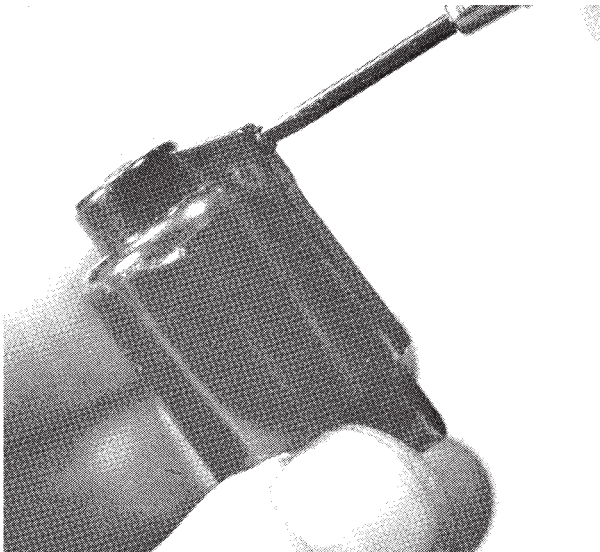
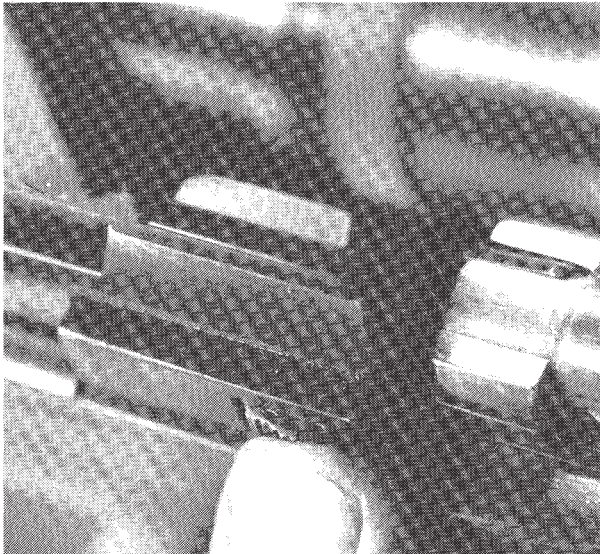
Weight: 6-1/2 pounds

A redesign of the original L-57 Forester of 1958 was done in 1960. It was designated the Model L-579, and was still called the Forester. In two varmint chamberings and one for medium game, it became very popular in its time, and is still treasured for the smoothness of its action. One of the reasons for this feature is a full-length guide on the bolt, mounted on a pivot-ring in the style of the old Mauser extractor. All Sako rifles are of outstanding quality in both materials and workmanship. The Finnbear and Model 72 are essentially the same and the instructions will generally apply.



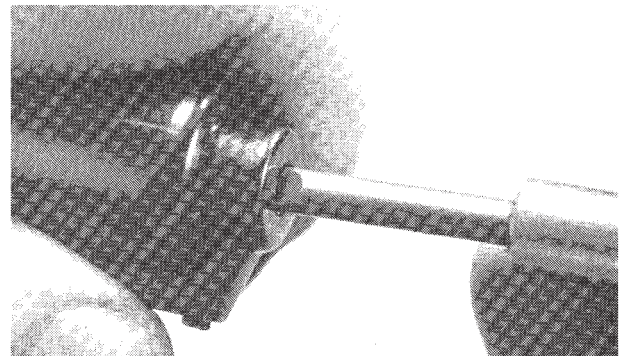
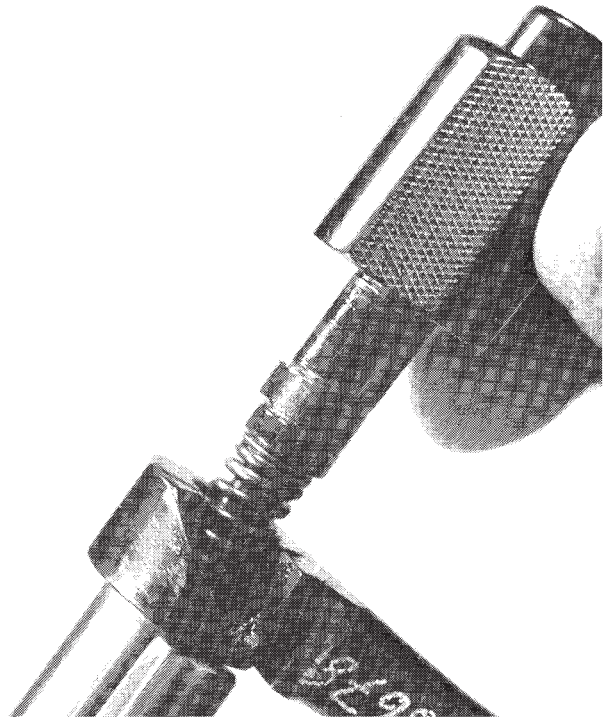
Disassembly:

1. Open the bolt and move it toward the rear, while pushing in the bolt stop, located at the left rear of the receiver. Remove the bolt from the rear of the receiver.



3. Back out the striker shaft lock screw, located on the underside of the cocking piece at the rear.

2. Grip the underlug of the cocking piece firmly in a vise, and pull the bolt body forward to clear the lug from the bolt sleeve. Turn the bolt until the lug on that bolt sleeve is aligned with the exit track on the bolt body, and separate the body from the sleeve and striker assembly.

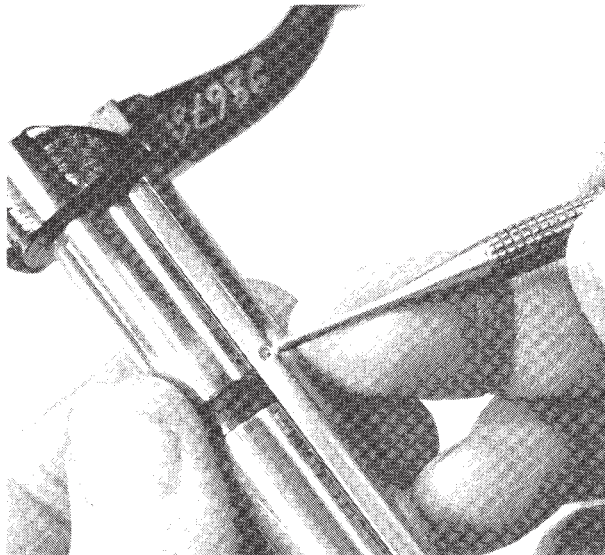


4. With a firm grip on the bolt sleeve and the striker spring, use a screwdriver to turn the screw-slotted rear tip of the striker shaft clockwise (rear view) until the striker is free from the cocking piece. The spring is under tension, so keep it under control.

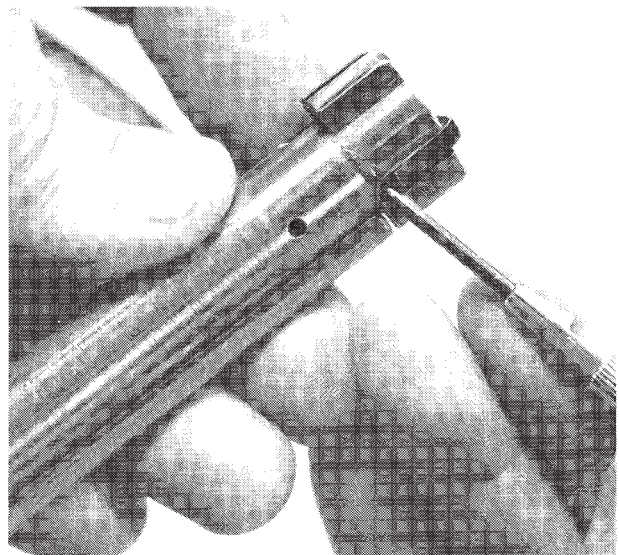


5. Remove the cocking piece, bolt sleeve, and spring from the striker shaft toward the rear.

6. Remove the cocking piece from the bolt sleeve.

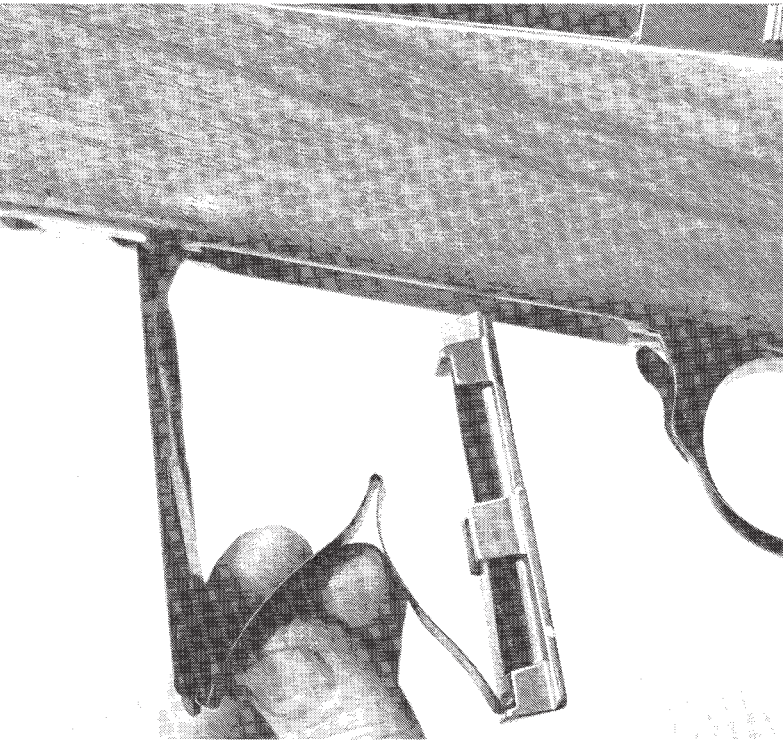


7. A small cross pin retains the bolt guide on the side of the bolt. The mounting ring is not removed in normal takedown. If the guide is removed, take care not to lose the guide rib stop and spring, mounted inside the rib at the front.

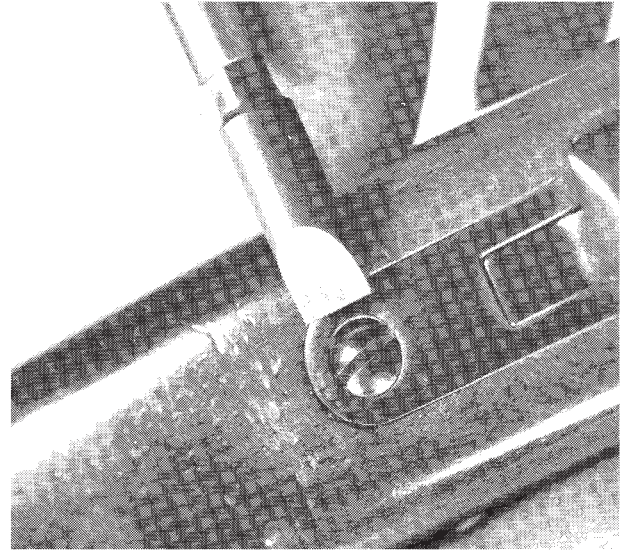


8. Insert a small screwdriver between the extractor and its plunger, and depress the plunger toward the rear, lifting the extractor out of its recess. **Caution:** The spring is compressed, and can send the plunger quite a distance, so control the plunger and ease it out.

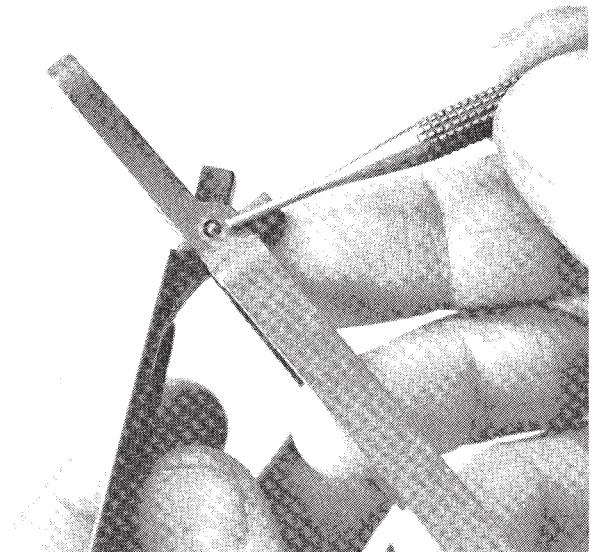
- 9.** Release the magazine floorplate latch, located in the front of the trigger guard, and open the floorplate. Flex the magazine spring away from the plate at the rear, and slide it rearward and out of its mounting slots. The magazine follower can be taken off the spring in the same manner.



- 10.** Close and latch the floorplate, and remove the large vertical screws at the front of the magazine housing and at the rear of the trigger guard. Lift the action out of the stock.

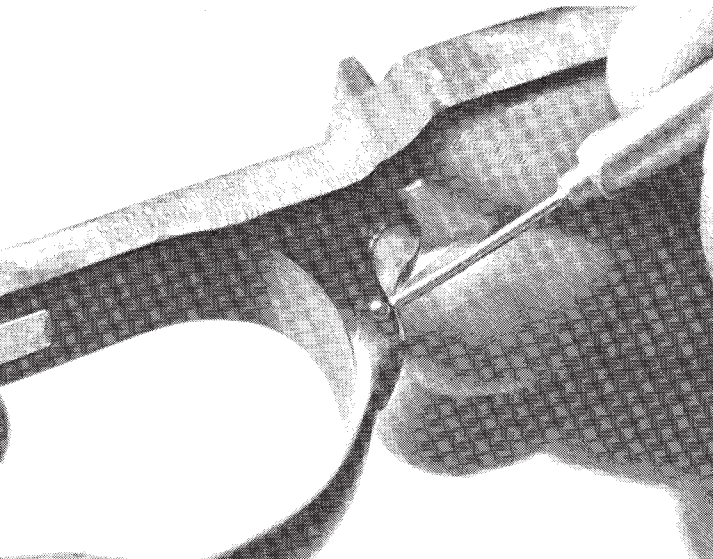


- 11.** The trigger guard/magazine assembly can now be removed downward. When this unit is removed, take care not to lose the steel spacer plates at the front and rear, inside the stock.

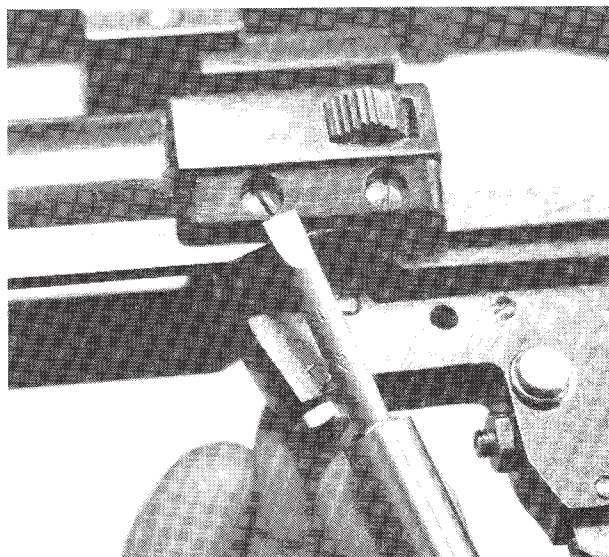
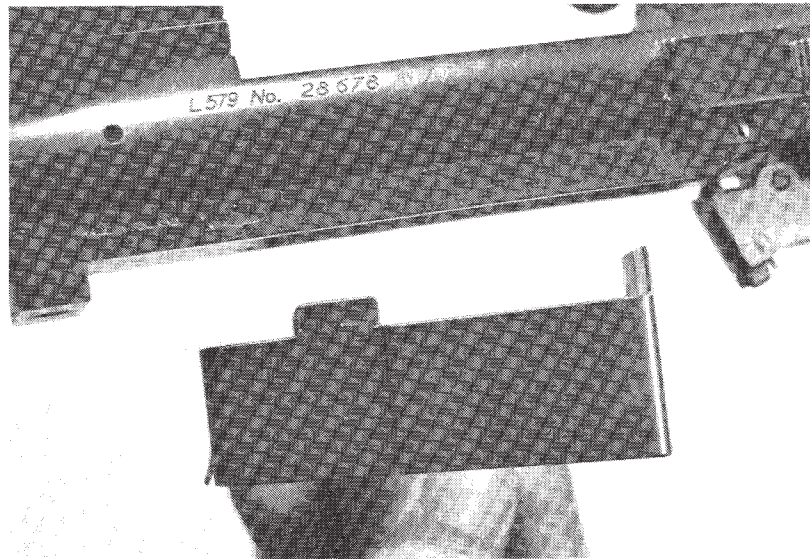


- 12.** The magazine floorplate can be removed by drifting out its hinge cross pin.

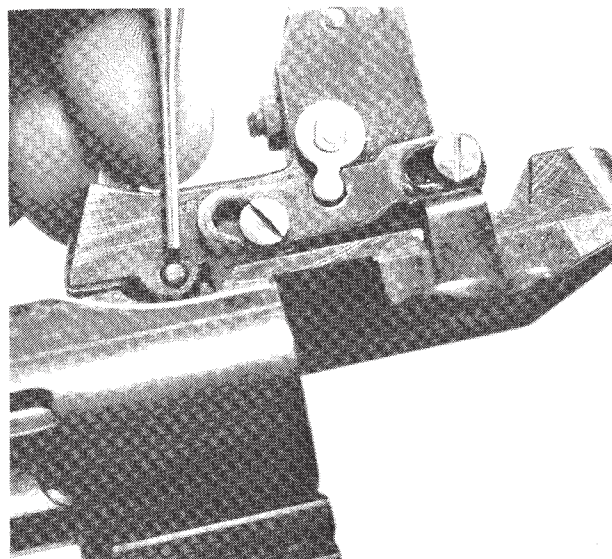
- 13.** A small cross pin at the front of the trigger guard retains the magazine floorplate latch and its spring. **Caution:** The spring is very strong. Restrain the latch, and ease it off.



- 14.** The magazine box is easily detached from its recess on the underside of the receiver.

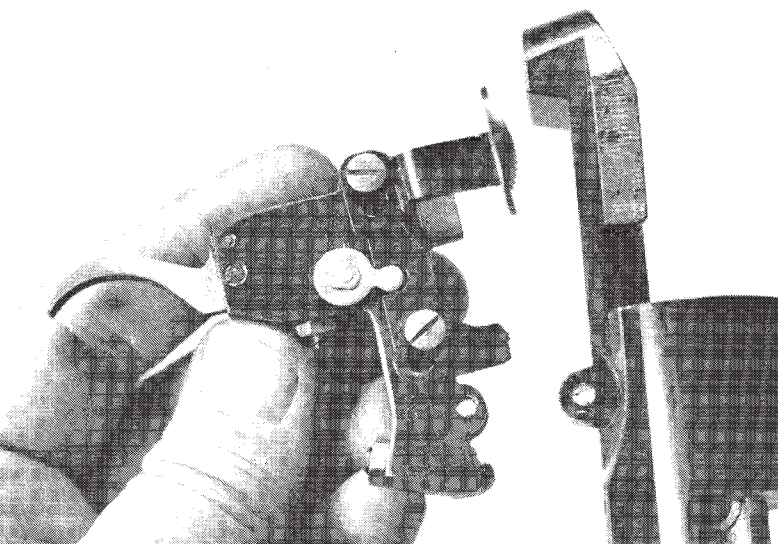


- 15.** The bolt stop is retained by two screws on the left rear of the receiver, and is removed toward the left, along with its torsion spring. The bolt stop is also the ejector, and is pivoted inside its housing by a vertical pin. Drifting out the pin upward will free the stop/ejector and spring for removal.

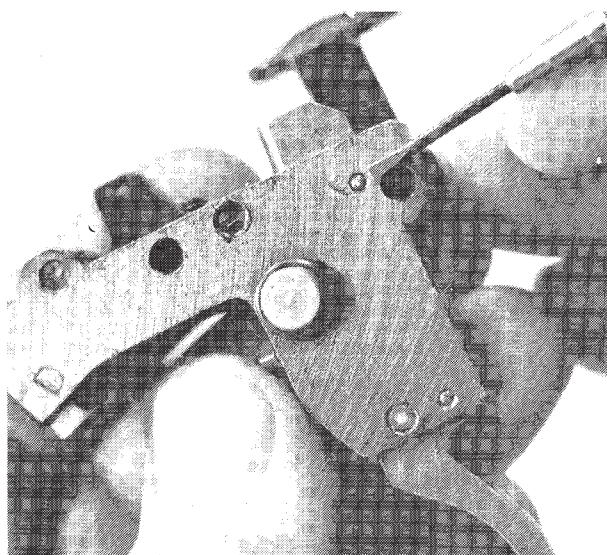
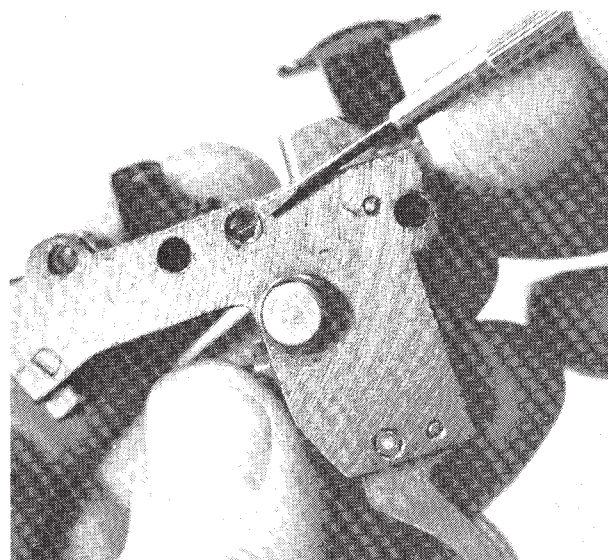


- 16.** Drift out the cross pin at the upper front of the trigger housing.

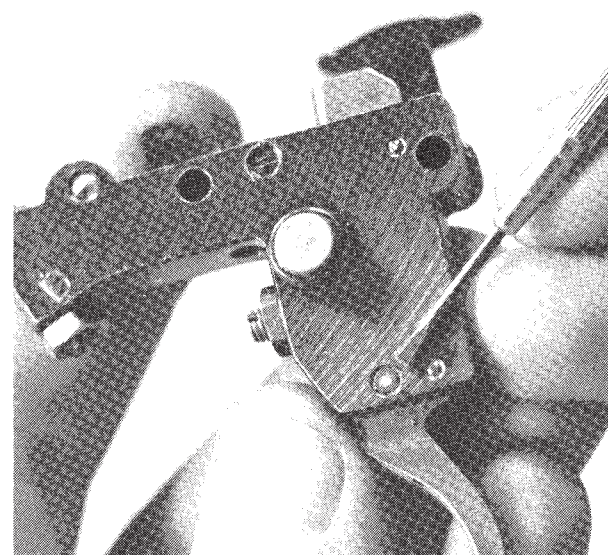
- 17.** Remove the trigger assembly downward. Removal of this assembly will not disturb the trigger adjustment settings. Backing out the two screws on the right side of the housing will allow removal of the safety-lever toward the right. **Caution:** Removal of the safety will release the positioning ball and spring. See the next step.



- 18.** The safety ball and spring are mounted across the unit, and backing out this small headless screw on the left side will allow separate removal of the ball and spring.

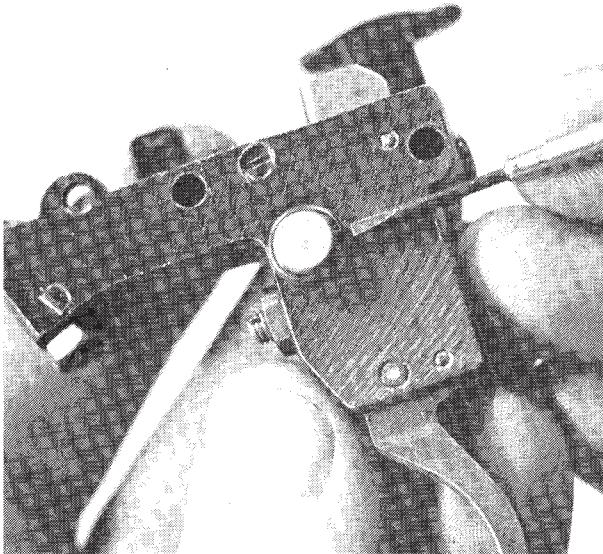


- 19.** After the safety is removed, driving out this cross pin will allow the sear to be taken out upward.



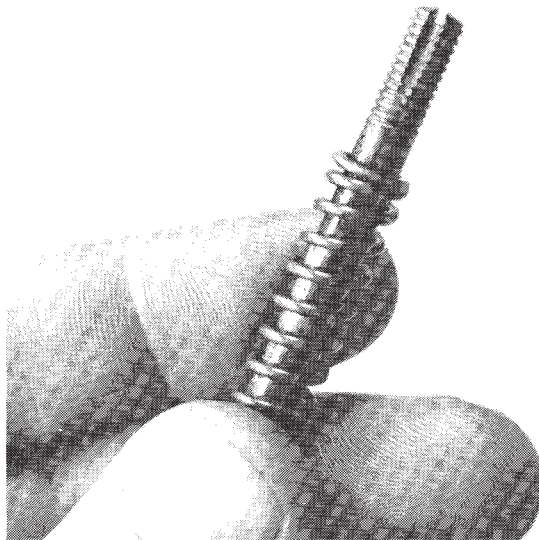
- 20.** Drifting out the trigger cross pin, and the small stop pin behind it, will allow the trigger to be taken out downward. Unless the process of adjustment is known, the trigger adjustment nuts and screws should not be disturbed.

- 21.** The safety cross bolt is retained by a C-clip on the left side, and after its removal the safety bolt is taken out toward the right.

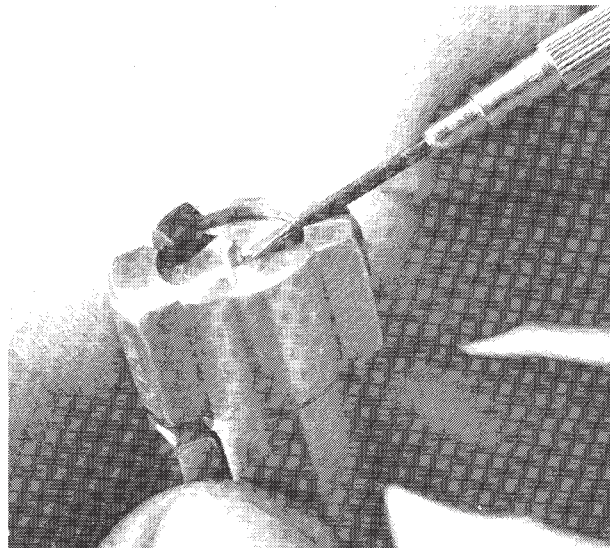


Reassembly Tips:

- 1.** Note that the sides of the striker shaft at the rear have deep grooves lengthwise in the screw threads, and one of these must be aligned with the lock screw.



- 2.** The degree of protrusion of the firing pin point from the breech face is governed by the level to which the striker shaft is turned on its threads during reassembly. Generally speaking, the rear tip of the striker shaft should be level with the rear of the cocking piece. To be more precise, the protrusion of the firing pin point at the front should be .055-inch, if you have a means of measuring this.



- 3.** To properly check the protrusion, the bolt sleeve/striker assembly must be installed in the bolt. The photo shows an adjustment that has *far too much protrusion*. Adjustment can be made with the bolt fully assembled. After adjustment, be sure to tighten the lock screw securely. Note that the striker must be recocked before the bolt is put back in the gun.



Savage Model 25

Data: Savage Model 25

Origin: United States

Manufacturer: Savage Arms Co., Westfield, MA

Cartridge: .17 Hornet, .22 Hornet, .222 Rem,
.223 Rem., .204 Ruger

Magazine Capacity: 4 rounds

Overall Length: 43.75 inches

Barrel Length: 24 inches

Weight: 8.25 pounds

The Savage Model 25 includes the Lightweight Varminter series of rifles. Looking very similar to the 93 series of rimfire rifles and to the Model 40, it is, however, centerfire rather than rimfire (93), and is a repeater rather than the single-shot (40). The 25 is chambered in higher pressure cartridges and this can be evidenced by the three front locking bolt lugs seen on most centerfire rifles. The standard Lightweight Varminter has a nice laminated stock, the Varminter-T uses a thumbhole stock, and the Walking Varminter uses a lightweight synthetic stock and a shorter, lighter weight barrel.

Disassembly:

1. To remove the bolt assembly, open the bolt, hold the trigger to the rear, and pull the bolt fully out of the rifle to the rear.



2. Use a hex key to unscrew the bolt end cap.

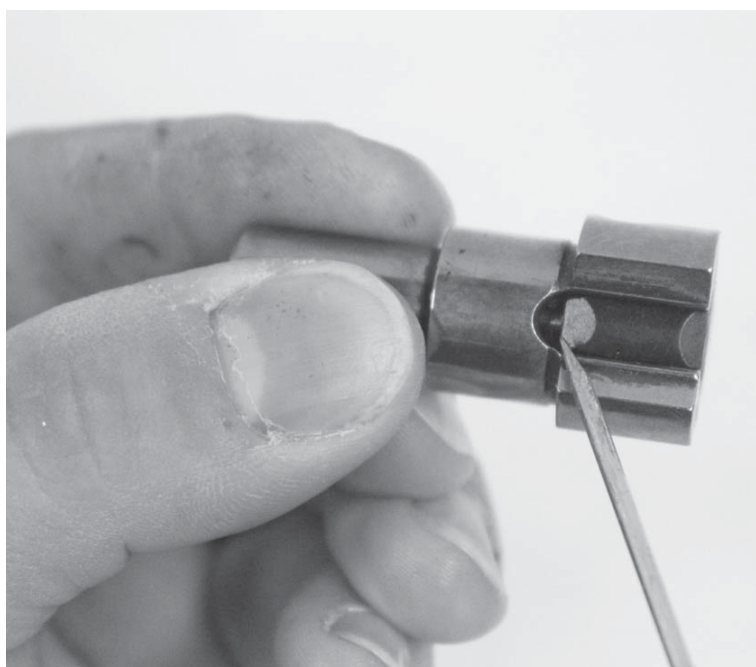


3. Push out the cross pin (picture 1). Then withdraw the firing pin assembly out the rear of the bolt body (picture 2)

- 4.** Push out the bolt head pin. Then the bolt head can be removed from the bolt body. Between the head and body is a flat bolt spring.



- 5.** Push out this pin to remove the ejector.

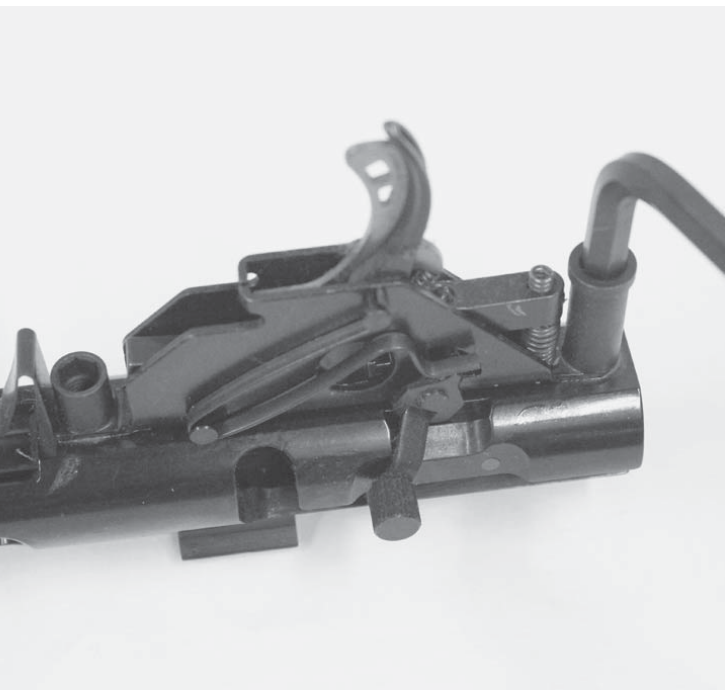


- 6.** The extractor can be removed by pushing the extractor plunger to the rear to clear the extractor, which can then be rocked forward and out of the bolt.

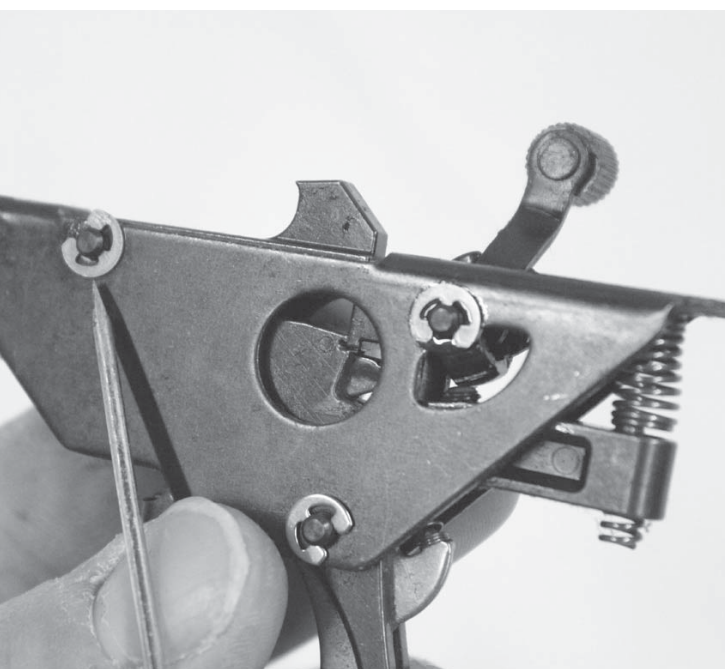


- 7.** To remove the trigger guard, unscrew the three action bolts behind the trigger and behind and in front of the magazine well. This will also separate the stock from the barreled action.

- 8.** To remove the trigger assembly, unscrew the two hex screw bolts at the front and rear of the assembly.



- 9.** Pinch the safety spring to unlatch it from its seat.



- 10.** Remove the three E-clips from the left side of the assembly.



- 11.** Remove the safety arm by first pulling the pin, then the lever itself with its keeper.

- 12.** While keeping the sear controlled, pull out the sear pin.



- 13.** Rotate the sear forward and down, then lift it from the assembly.



- 14.** Push out the trigger pin and remove the trigger downward.



- 15.** If necessary, the trigger insert and its spring can be removed from the trigger by rotating them down and forward and removing them to the rear. The trigger return spring can also be removed from the trigger, if necessary.

Reassembly Tip:



1. When reinstalling the bolt head, the extractor should be on the same side of the bolt assembly as the bolt handle.



Savage Model 99

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Savage Model 99 also apply to the following guns:

Savage Model 99A

Savage Model 99C

Savage Model 99DE Citation

Savage Model 99E

Savage Model 99EG

Savage Model 99F Featherweight

Savage Model 99H

Savage Model 99PE

Savage Model 99RS

Savage Model 99-358

Savage Model 99B Takedown

Savage Model 99CD

Savage Model 99DL

Savage Model 99E Carbine

Savage Model 99F

Savage Model 99G

Savage Model 99K

Savage Model 99R

Savage Model 99T

Data: Savage Model 99

Origin: United States

Manufacturer: Savage Arms Company
Westfield, Massachusetts

Cartridges: 22-250, 243, 250 Savage,
300 Savage, 308 Winchester

Magazine capacity: 5 rounds

Overall length: 39-3/4 to 41-3/4 inches

Barrel length: 22 and 24 inches

Weight: 6-3/4 to 7 pounds

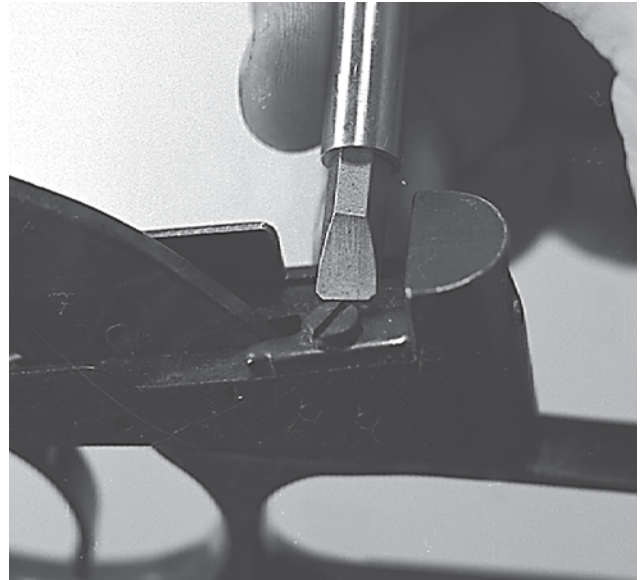
In 1899, Arthur W. Savage modified his original design of 1895, and the Model 99 rifle was born. The unique Savage rotary magazine was discontinued around 1984. The Model 99A, which replaced the original Model 99 in 1922, is the example shown here. The Model 99C, which had a detachable box magazine, was the last version made. It was discontinued in 1997.

Disassembly:

1. Remove the buttplate to give access to the stock mounting bolt. Use a long screwdriver to remove the stock bolt, and take off the stock toward the rear. If the stock is tight, bump the front of the comb with the heel of the hand to start it.



2. Remove the vertical screw at the left rear of the lower receiver extension, and take off the bolt stop.

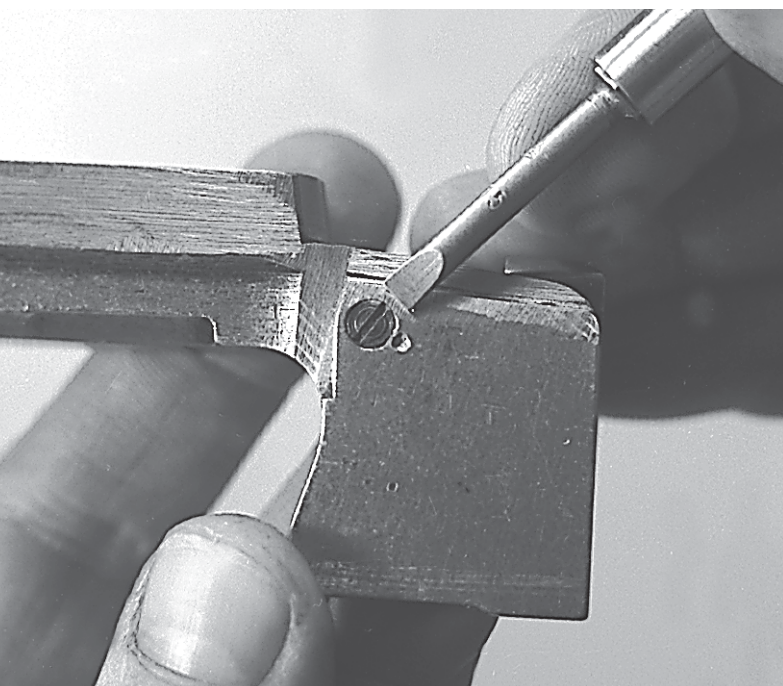
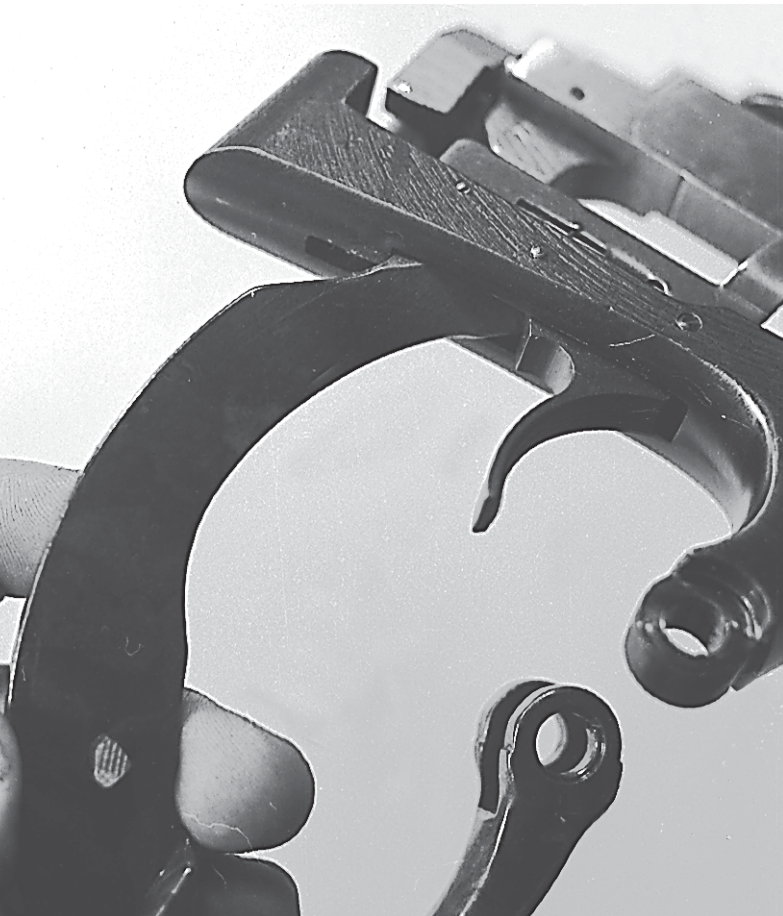


3. Open the action slowly, and restrain the cartridge cut-off, which will be released toward the right as the bolt clears it. Remove the cutoff and its spring toward the right.

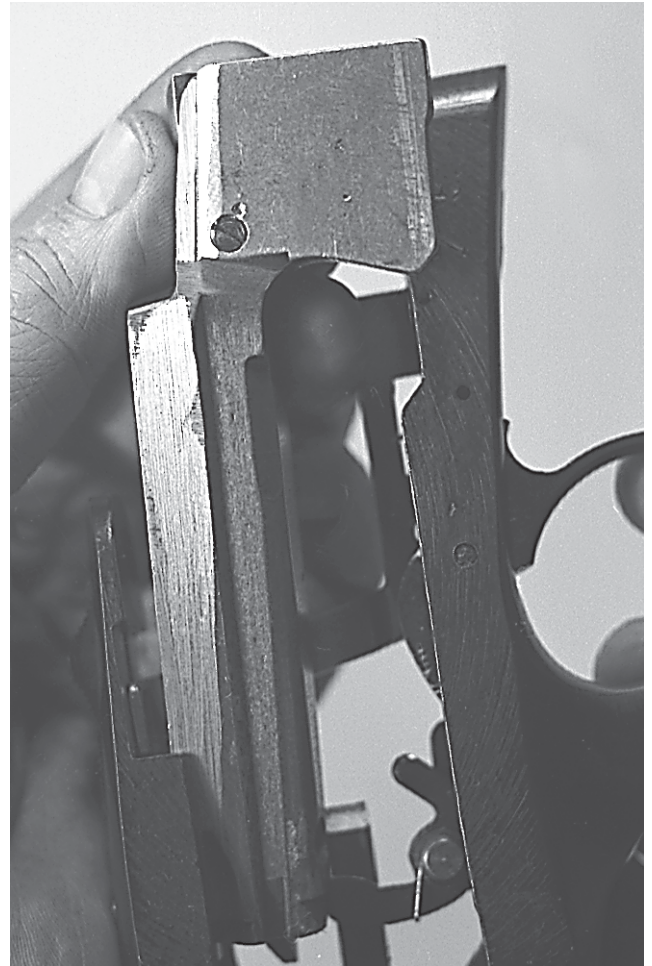


4. Remove the cap screw from the lever pivot. Remove the lever pivot toward the right.

- 5.** Remove the front of the lever from its pivot loop and turn the rear arch slightly to clear its inner lug from the bolt. Remove the lever downward.

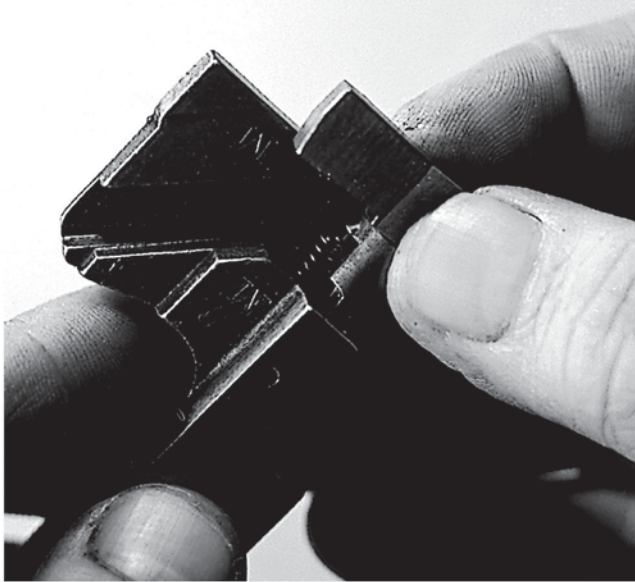


- 6.** Move the bolt all the way to the rear, and pull the trigger to release the sear. Tip the sear to clear the bolt, and remove the bolt toward the left rear. Turn the lower rear of the breechblock (bolt) out toward the left to clear the receiver as the bolt is removed.



- 7.** Remove the hammer and bushing screw from the left side of the bolt at the rear. Note that the screw is usually staked in place, and may require some effort in removal.

- 8.** Remove the hammer and striker assembly toward the rear. Take care not to lose the hammer rebound spring, which will be released as the assembly is moved out to the rear.



- 9.** A vertical pin in the rear of the firing pin retains it on the front of the hammer shaft. Drifting out the pin will release the firing pin, hammer spring, and hammer bushing for removal toward the front. The pin is contoured at its ends to match the outside surface of the firing pin, and removal should be done only for repair purposes, not in normal takedown. If this unit is disassembled, proceed with caution, as the powerful hammer spring will be released.



- 10.** The extractor is its own spring, and is retained by a vertical pin on the right side of the bolt. The pin is driven out upward, and the extractor is taken off toward the right.

- 11.** A small cross pin at the rear of the lower receiver extension retains the safety slide. There is an access hole on the left side which allows the pin to be drifted out toward the right.



- 12.** Move the safety slide all the way to the rear, and tip it downward at the front and upward at the rear for removal.



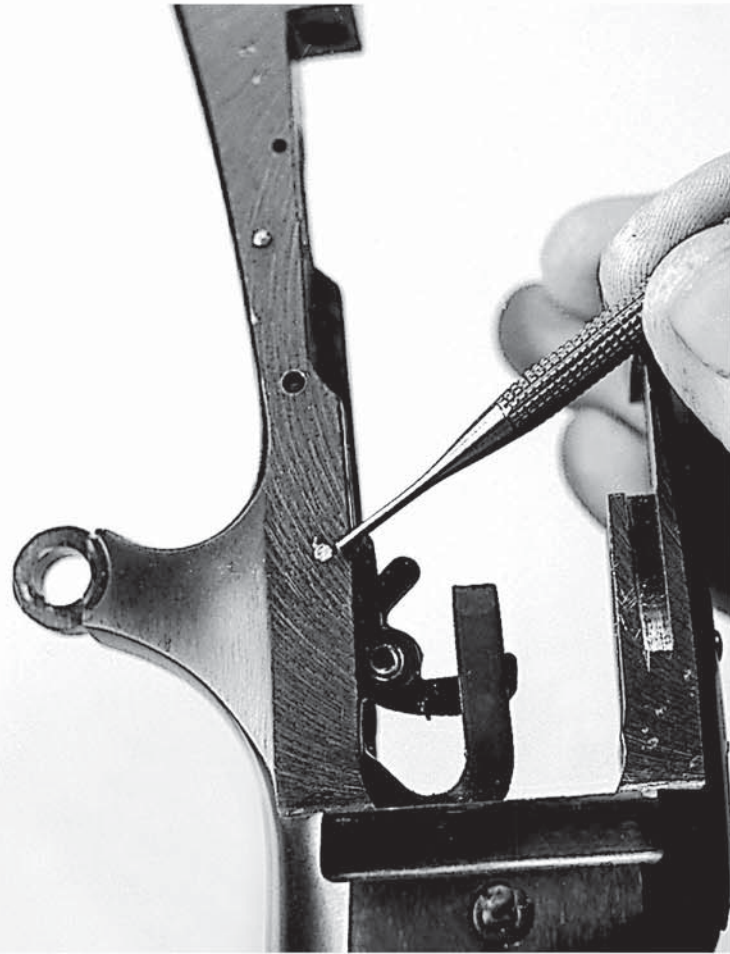
- 13.** Move the safety button all the way to the rear, and remove it from the top of the receiver.



- 14.** The safety positioning spring is retained by a short cross pin, and there is an access hole on the left side of the receiver which allows the pin to be drifted out toward the right. Remove the spring upward.

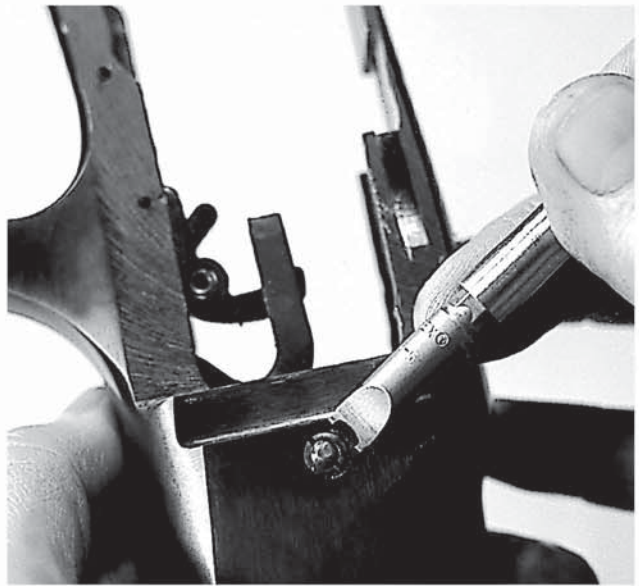


- 15.** Drift out the trigger cross pin, and remove the trigger downward and toward the rear. **Caution:** The trigger spring is under tension, so control it and ease it out.



16. Drift out the short pin at the lower rear of the sear bracket. There is no access hole for this pin, so it is necessary to angle a drift punch to start the pin out, then remove it toward the right.

17. Removal of the sear bracket cross screw and nut will require a special twin-pointed tool, easily made by cutting away the center of a screwdriver tip. If the screw is tight, it will be necessary to stabilize the slotted screw head on the opposite side with a regular screwdriver as the nut is removed.

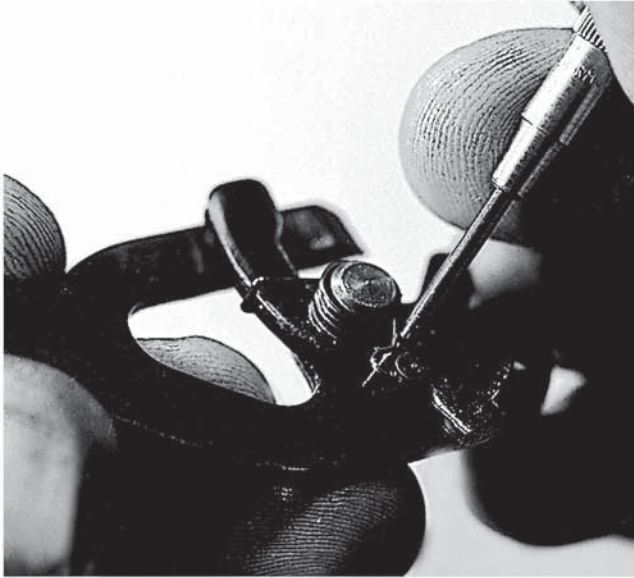


18. After the nut is removed, the screw must be unscrewed from the receiver and taken out toward the left.

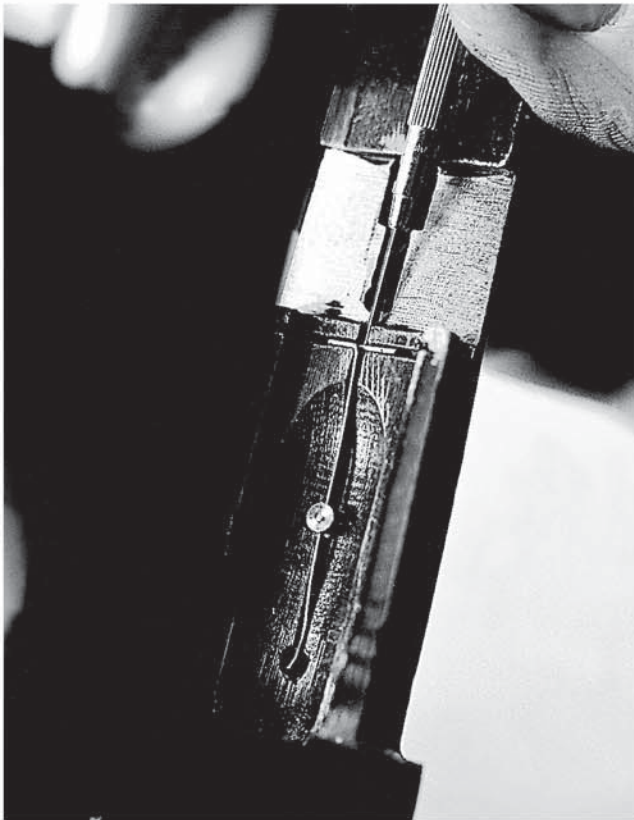


19. Move the sear bracket assembly upward, out of its slot in the receiver, then remove it toward the rear.

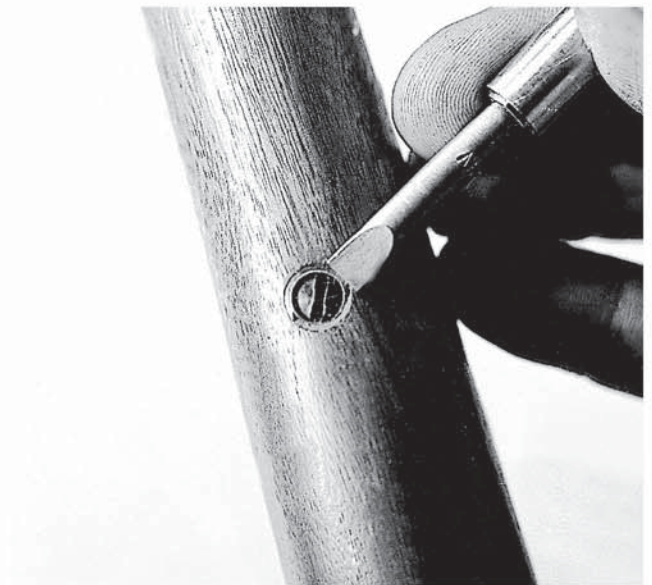
- 20.** Unhook the lower arm of the sear spring from its groove on the stop stud, and allow it to swing around to the rear, relieving its tension. Remove the spring from the sear post.



- 21.** The sear is factory-riveted to the sear bracket, and should not be removed except for repair.



- 22.** The hammer indicator can be removed from the top of the receiver by using a very small tool to left the rear "T" of the indicator spring from its recess. Take out the spring toward the rear, and remove the indicator upward.



- 23.** The forend is retained by a single vertical screw on its underside, and is taken off toward the front and downward.



- 24.** The same twin-pointed tool used to remove the sear bracket nut can also be used to take off the carrier spindle nut. **Caution:** *Disassembly of the magazine system of the Model 99 is not recommended unless this is necessary for repair, as reassembly is difficult for those not familiar with it.* If disassembly is unavoidable, begin by removing the spindle nut.

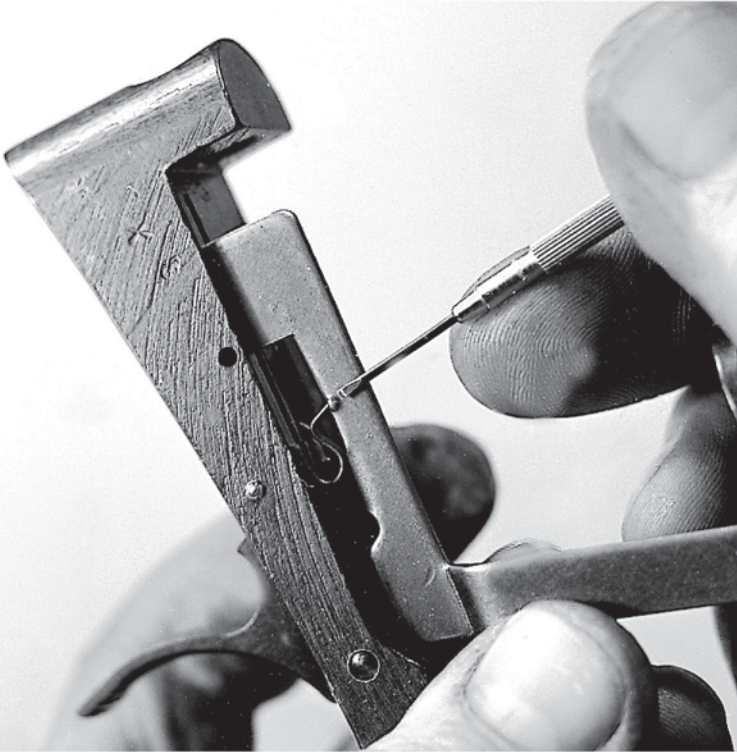
- 25.** The carrier spindle head screw is located on the left side of the receiver near the front edge. Restrain the carrier spindle head against rotation, and remove the screw toward the left. Slowly release the tension of the carrier spring, allowing the head to rotate. The spindle head, carrier, and spring can now be removed toward the front, and the carrier spindle and spindle bracket are taken out toward the rear.



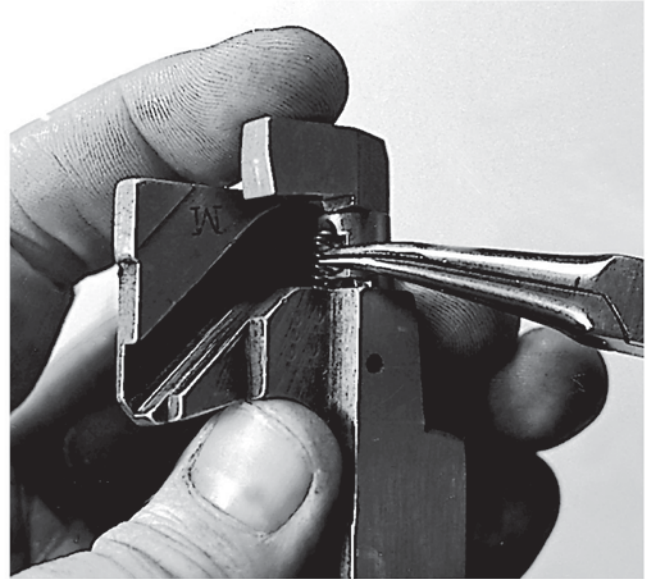
- 26.** The cartridge guide is retained by two vertical pins in the lower edge of the ejection port, and is not removed in normal takedown. If necessary, the pins are driven downward and retrieved from inside the receiver, and the guide is taken off toward the left and upward.

Reassembly Tips:

1. When replacing the safety slide, be sure the tip of the positioning spring engages its recess on the underside of the safety slide.



2. When replacing the hammer and striker assembly in the bolt, remember to insert the rebound spring below the assembly just before pushing it into place for insertion of the retaining screw.



3. When replacing the lever pivot, note that there is a lug beneath its head on the left side that must be oriented to engage a recess in the lever loop on the receiver.

If the magazine has been dismantled, the carrier spring must be retensioned during reassembly by turning the spindle head before reinsertion of the cross screw. The number of turns required depends on the strength of the spring, so this can't be specified here.



Savage Model 110

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Savage Model 110 also apply to the following guns:

Savage Model 110B

Savage Model 110D

Savage Model 110F

Savage Model 110FP

Savage Model 110FXP3

Savage Model 110GB

Savage Model 110GX

Savage Model 110K

Savage Model 110MC

Savage Model 110PE

Savage Model 110 Sporter

Savage Model 110WLE

Savage Model 112FV

Savage Model 112V

Savage Model 116FSS

Savage Model 110CY

Savage Model 110E

Savage Model 110FNS

Savage Model 110FX

Savage Model 110G

Savage Model 110GV

Savage Model 110GXP3

Savage Model 110M

Savage Model 110P

Savage Model 110S

Savage Model 110V

Savage Model 111 Chieftan

Savage Model 112R

Savage Model 114CU Classic Ultra

Data: Savage Model 110

Origin: United States

Manufacturer: Savage Arms Company
Westfield, Massachusetts

Cartridges: 243, 22-250, 270, 308,
30-06, 300 Magnum,
7mm Remington Magnum

Magazine Capacity: 4 rounds (3 in magnums)

Overall length: 43 inches

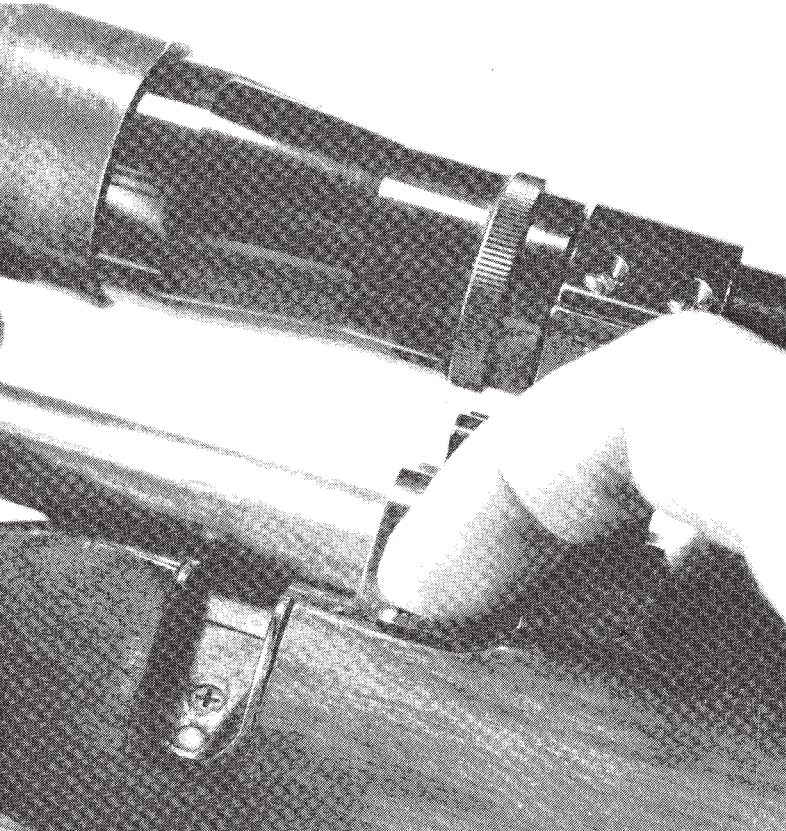
Barrel length: 22 inches

Weight: 7 to 8-5/8 pounds

Since its introduction in 1958, the Model 110 has been offered in a wide variety of sub-models, and several of these are still in production. This is one of the few rifles that is also available in a left-handed action, and the moderate price of the Model 110 has made it very popular. Recent additions to the line include a version with a detachable magazine. The instructions can be applied to all of the sub-models.

Disassembly:

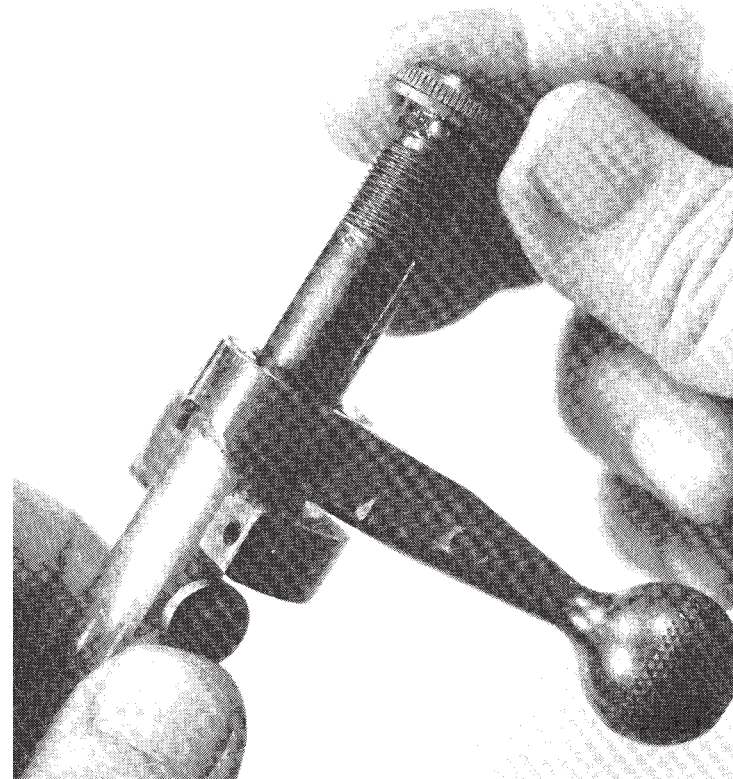
1. Open the bolt, pull the trigger, and push down the sear lever on the right side of the receiver. Hold it down, and remove the bolt toward the rear.



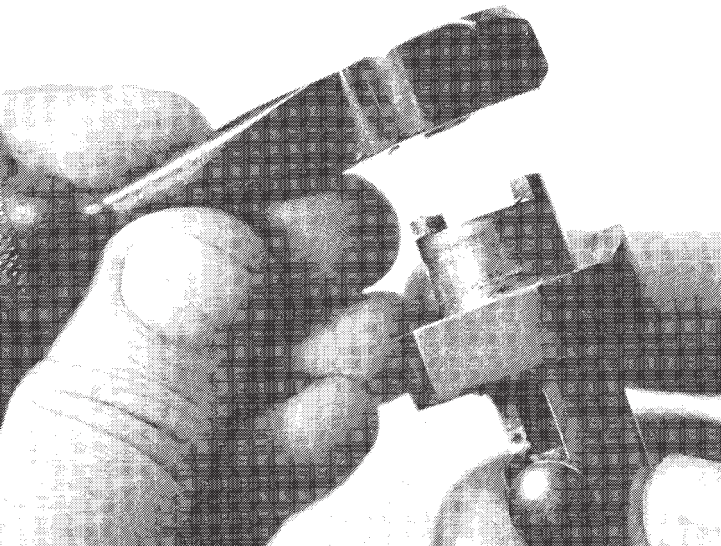
2. With a coin or a large screwdriver, unscrew the large knob at the rear of the bolt. Once it is started, its knurled edge will allow it to be turned by hand. Remove the knob toward the rear.



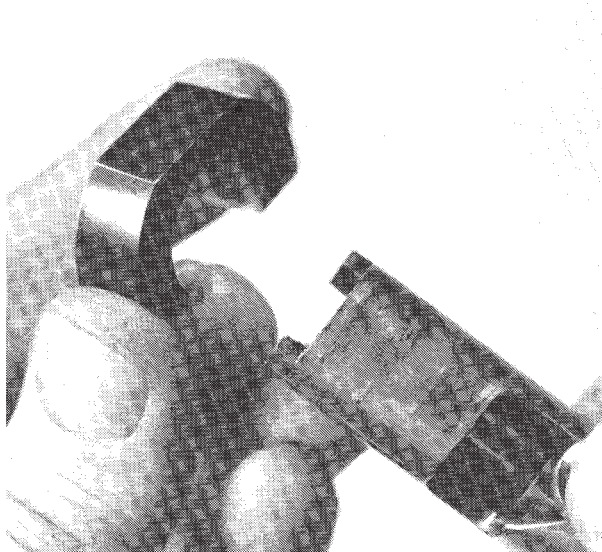
3. The attached cocking piece sleeve will come out with the knob as it is removed.



- 4.** Remove the bolt handle toward the rear.

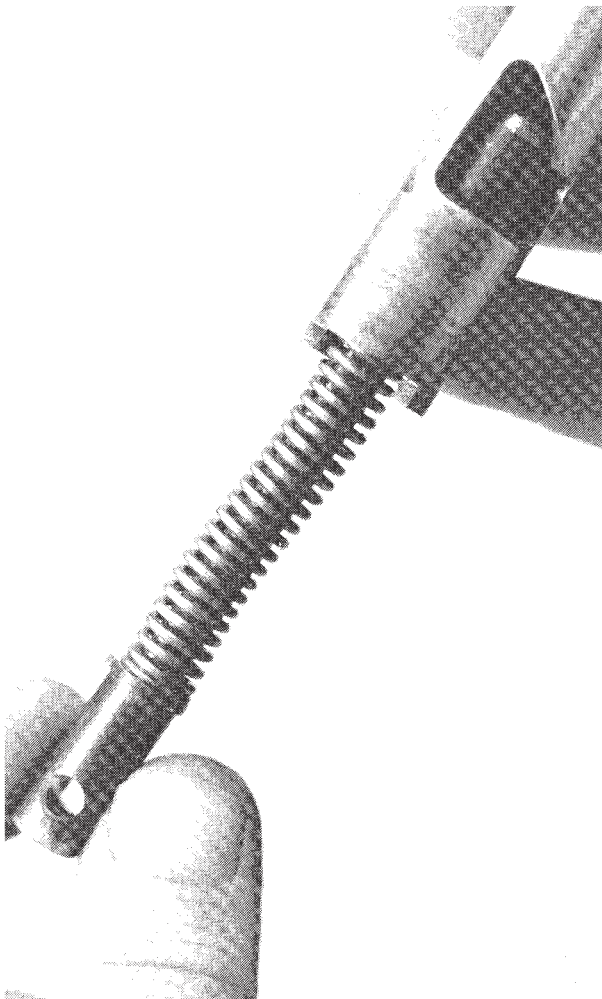


- 5.** Remove the rear baffle piece toward the rear. If necessary, the two detent balls and spring can be removed from the baffle by pushing the inner ball outward until it aligns with the hole at the bottom of the baffle. The spring will then force both balls out. In normal disassembly, these parts are best left in place.

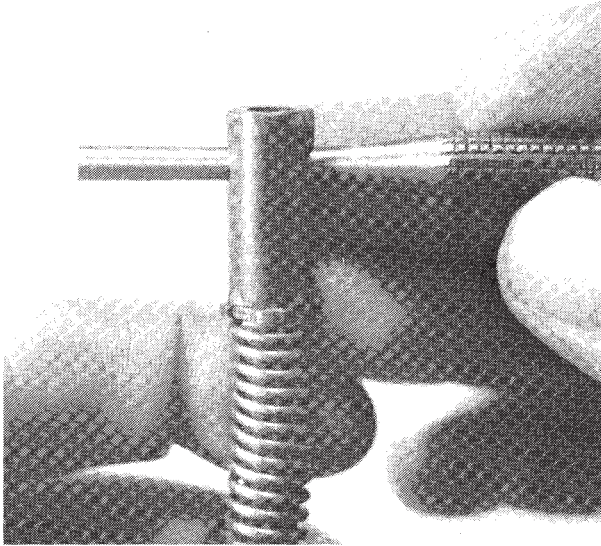


- 6.** Remove the cocking piece pin from its hole in the side of striker assembly.

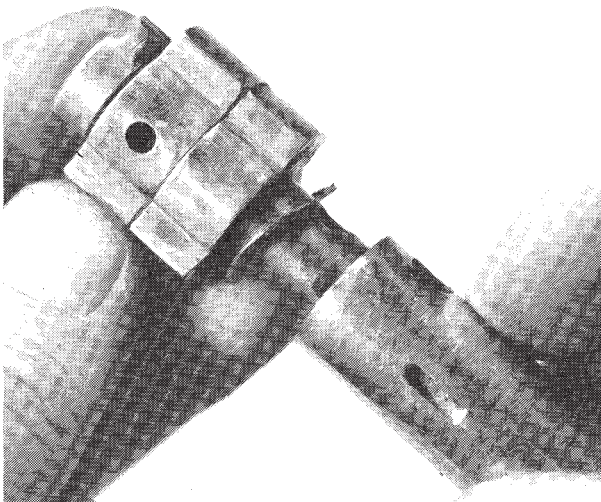
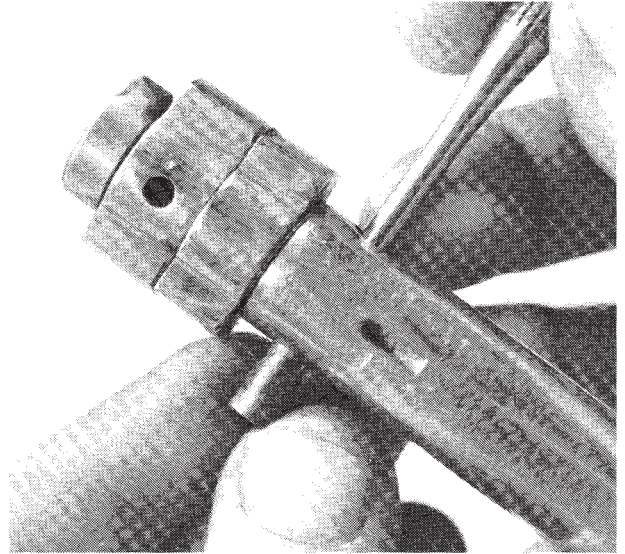
- 7.** Remove the striker assembly from the rear of the bolt.



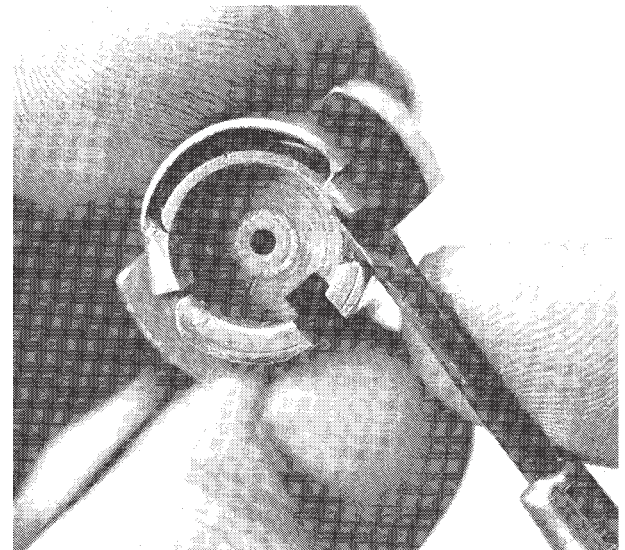
- 8.** Grip the front of the striker firmly in a vise, insert a punch through the hole in the cocking piece, and unscrew the cocking piece from the rear tip of the striker shaft. **Caution:** *The striker spring is partially compressed, so control the parts and ease the tension slowly.* Take care not to disturb the striker stop nut at the front, as it controls the protrusion of the firing pin point at the bolt face. If the striker system does not need repair, it's best not to disassemble it.



- 9.** Drift out the bolt head retaining pin.

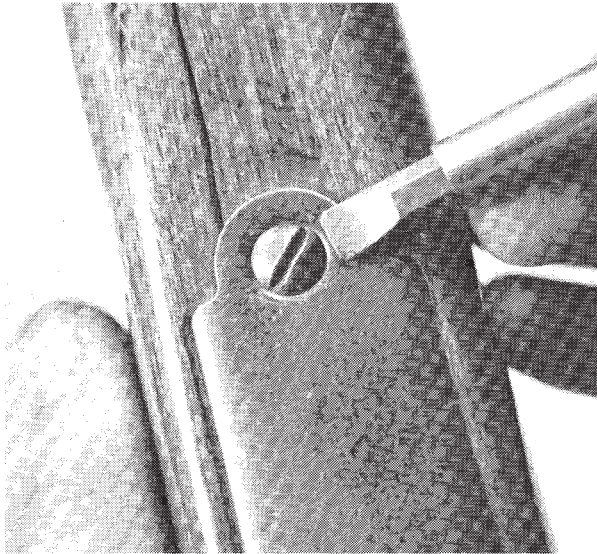


- 10.** Remove the bolt head, baffle and friction washer toward the front. The front baffle is easily taken off the bolt head toward the rear.

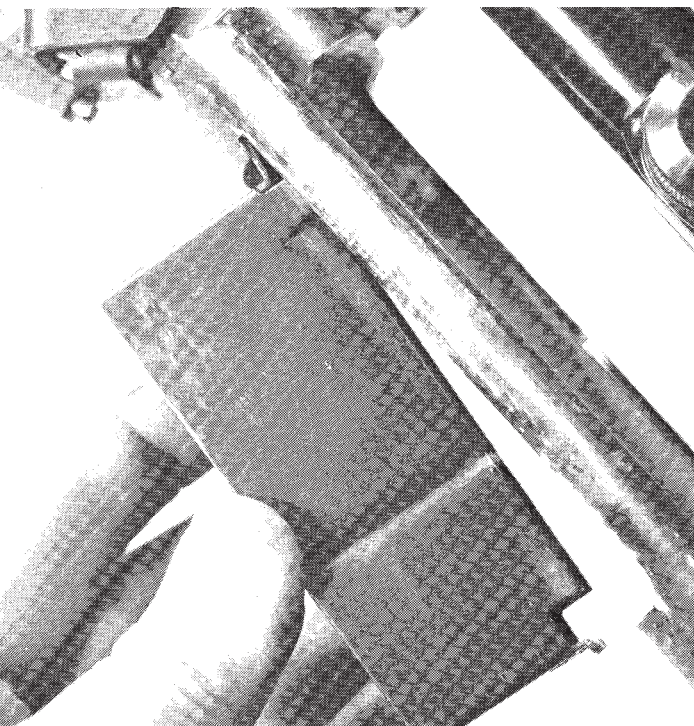
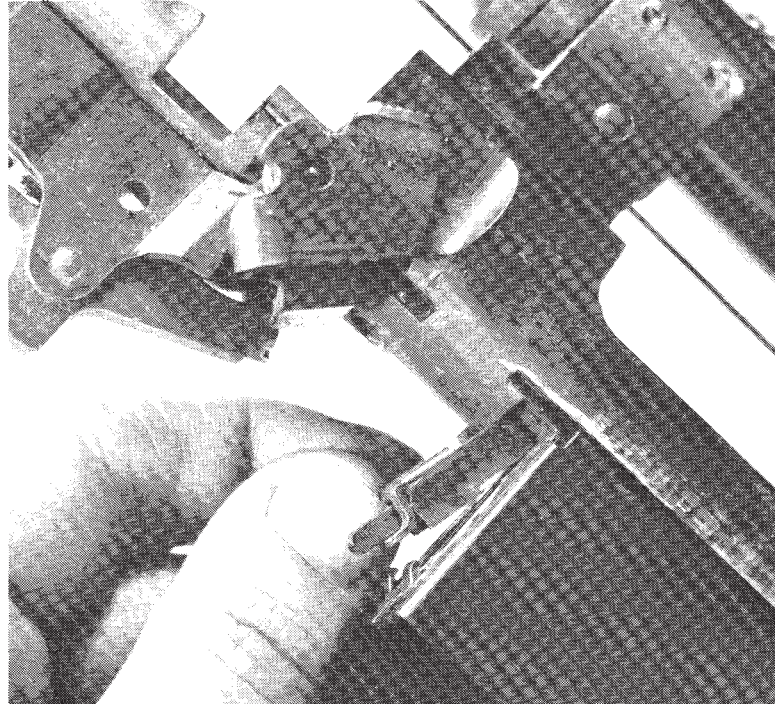


- 11.** Insert a small screwdriver under the end of the extractor nearest the ejector slot, and twist the screwdriver toward the left, levering the extractor out of its groove and toward the front of the bolt.

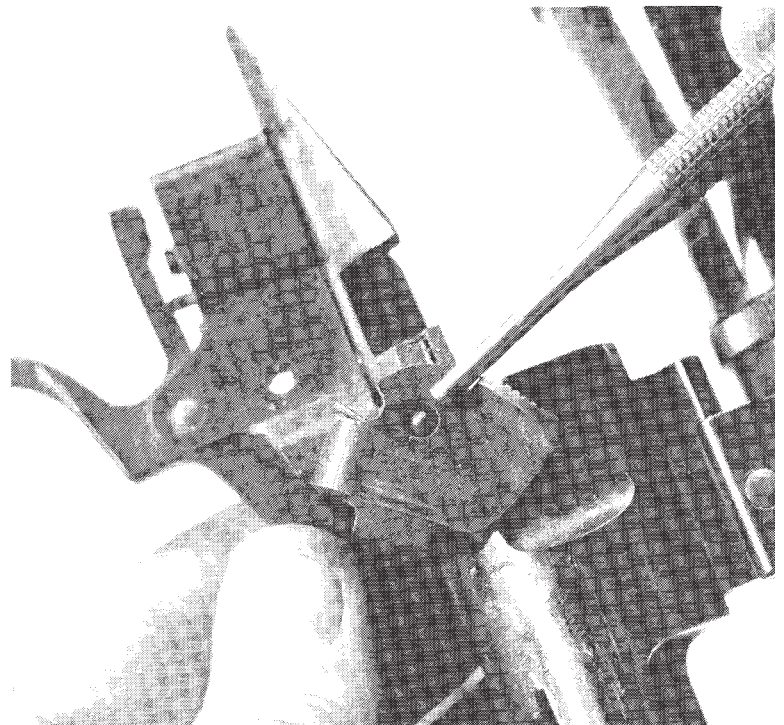
- 12.** Remove the large vertical screw on the underside at the front of the magazine floorplate. Remove the large vertical screw at the front of the trigger guard, in the rear tip of the magazine floorplate. Remove the floorplate and magazine insert downward, and take out the magazine spring and follower. Separate the action from the stock.



- 13.** Depress the combination magazine latch and ejector housing upward, tip its lower end away from the magazine box, and remove the latch/housing, spring, and ejector downward.

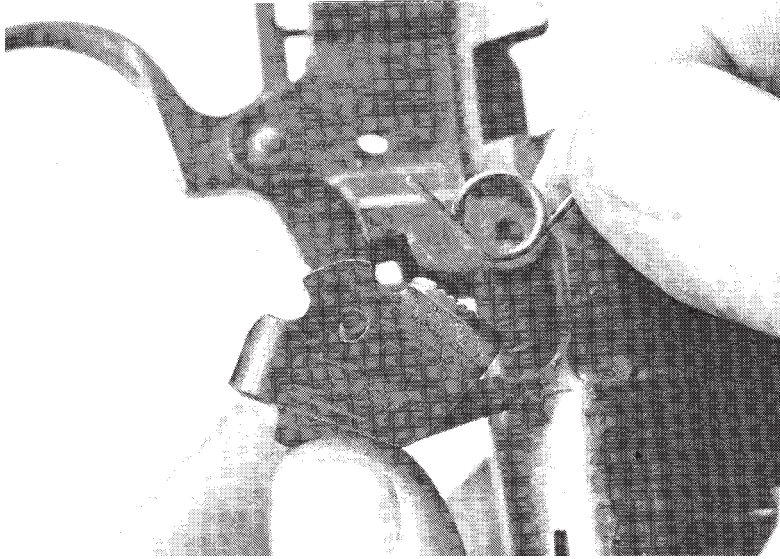


- 14.** The magazine box can now be moved toward the rear, tipped down at the front, and removed forward and downward.

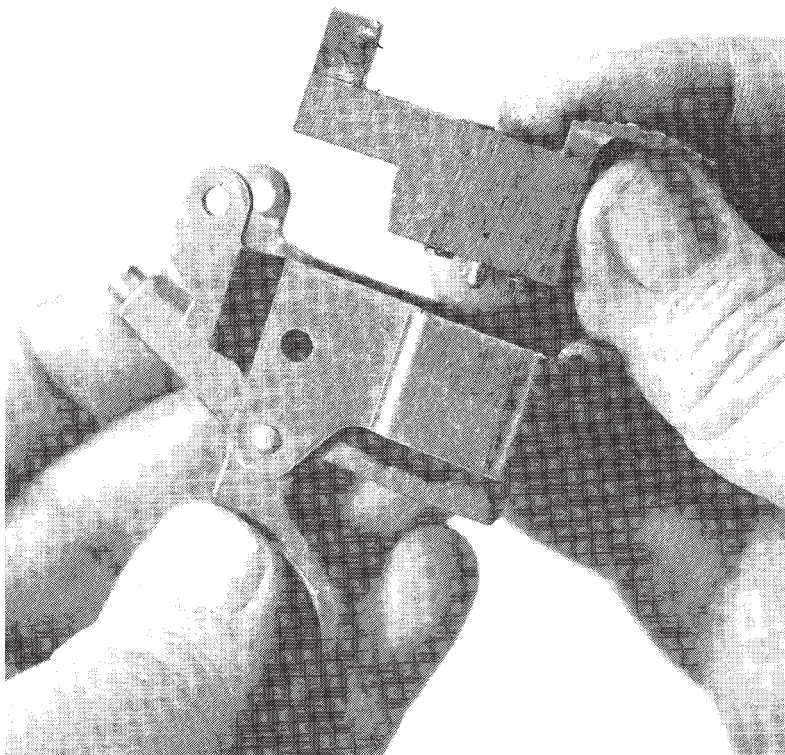
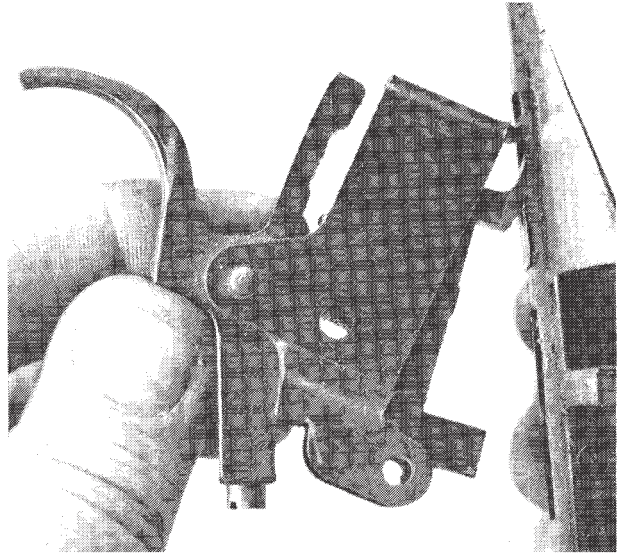


- 15.** While restraining the sear spring, push out the sear pin toward the left.

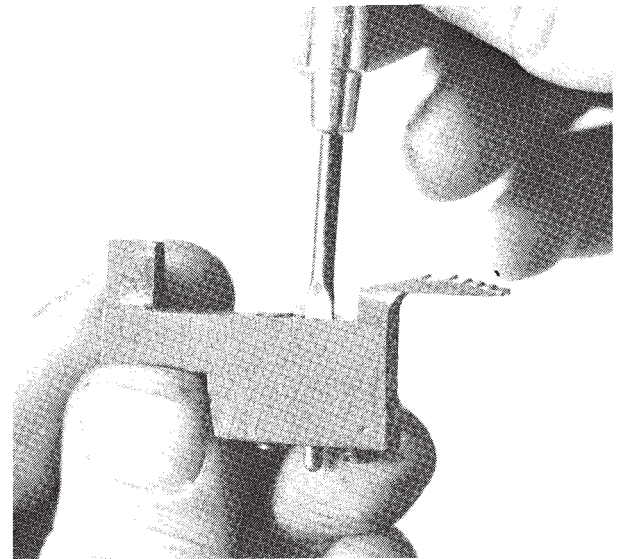
- 16.** Remove the sear downward and toward the front, along with its spring and bushing. Take care that the small bushing isn't lost.



- 17.** Tip the trigger housing down at the front, and unhook its rear lip from the underside of the receiver. Remove the trigger housing downward. After the housing is taken off, the small spring steel trigger pull screw cover can be slid to the rear of its slot at the rear of the receiver, and removed. Remove the safety bearing pin from the housing.

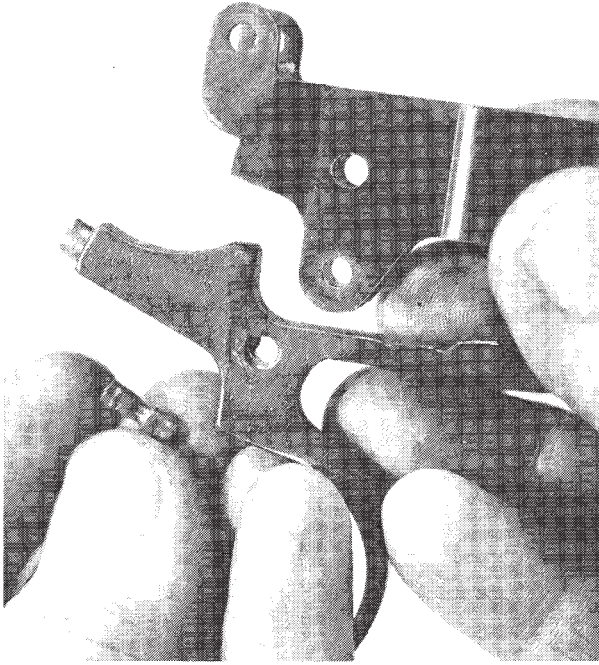


- 18.** Lift the safety-block from the top of the trigger housing.

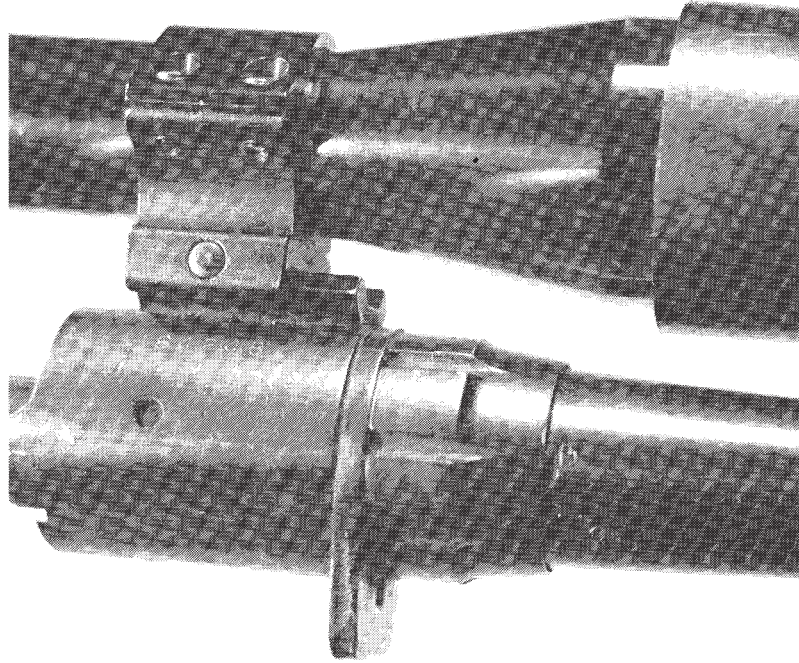


- 19.** The trigger adjustment screws in the safety-block need not be disturbed. The one at top center retains the trigger spring and its plunger, and can be taken out to allow removal of the spring and plunger upward.

- 20.** Drifting out the trigger cross pin will allow removal of the trigger from the housing. Note that this pin is held at center by a ball and spring in the front of the trigger, retained by a screw at the front. This screw should not be disturbed.

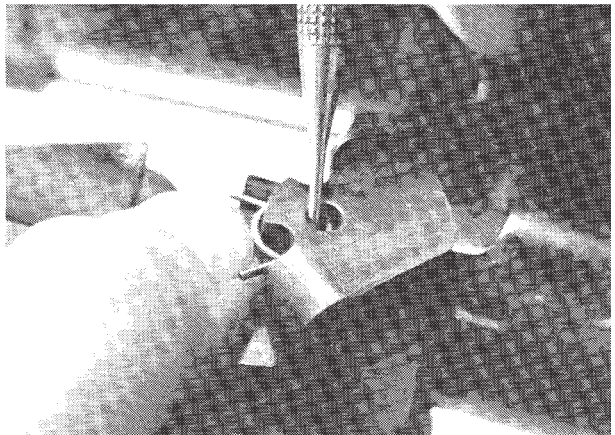


- 21.** The barrel is retained in the receiver by a large grooved nut which also holds the recoil lug on the front of the receiver. In normal takedown, the barrel is best left in place.

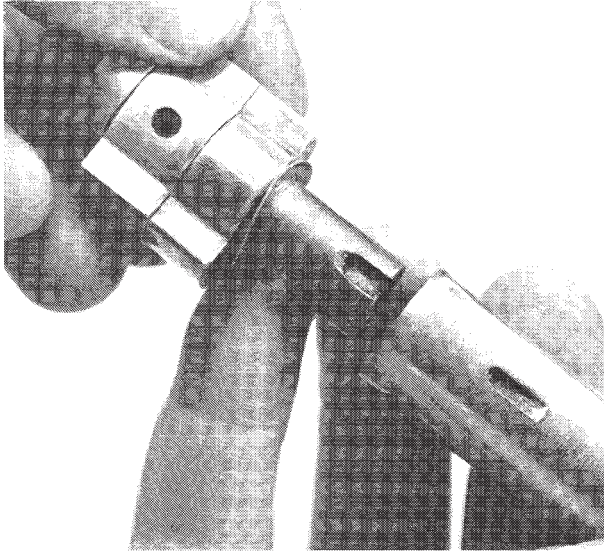


Reassembly Tips:

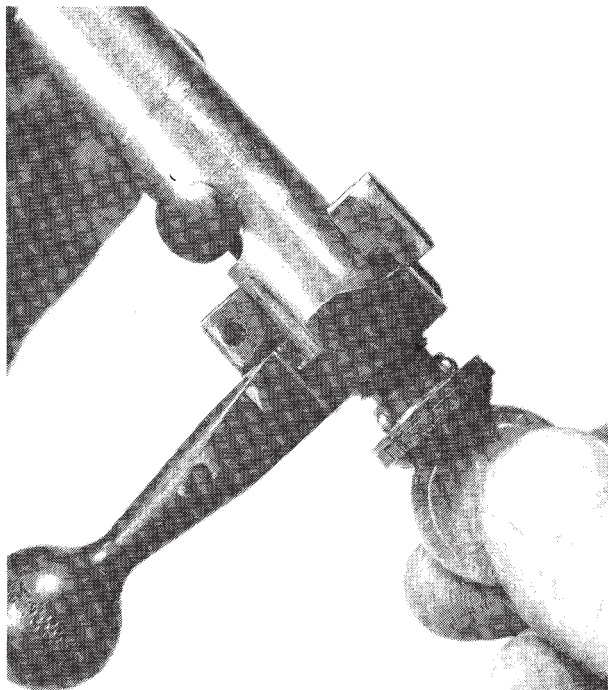
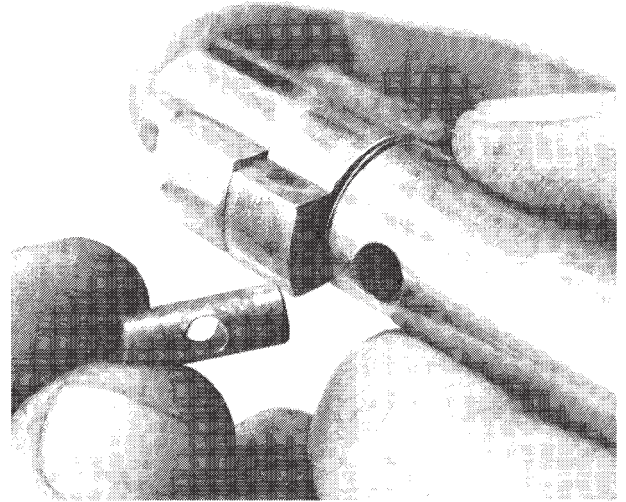
- 1.** When replacing the sear system, insert the sear cross pin from the left, and stop it short of crossing the spring recess. Insert the spring from the rear, and insert a drift punch into the spring bushing from the right to lever the bushing and spring into position for the cross pin to be pushed through to the right.



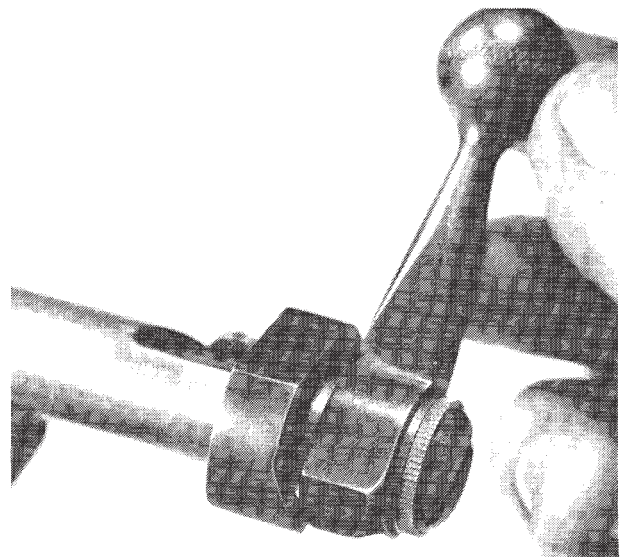
- 2.** When replacing the bolt head assembly, note that there is a recess in the rear tail of the bolt head and a depression and inside welt on the inside of the bolt body, and these must be aligned.



- 3.** When replacing the bolt head retaining cross pin, note that there is a hole at its center for passage of the firing pin, and this hole must be properly oriented as the cross pin is installed.



- 4.** When replacing the bolt takedown screw, set the cocking piece pin in the cocked position, as shown. This will make tightening the screw a bit stiffer, but will leave the action cocked for reinsertion of the bolt into the receiver.



- 5.** It is possible to install the rear baffle in reversed position. This photo shows its proper relationship with the bolt handle ring.



SIGArms Model SHR970

Data: SIGArms Model SHR970

Origin: Switzerland

Importer: SIGArms, Exeter,
New Hampshire

Cartridge: 30-06, 270

Magazine capacity: 4 rounds

Overall length: 41.9 inches

Barrel length: 22 inches

Weight: 7.2 pounds

The previous bolt action from SIGArms, the Model 200, was a beautiful piece of equipment, but it cost a lot. The nice little SHR970, introduced in 1998, shares one feature with the Model 200: You can interchange barrels, and have both a 270 and a 30-06 in the same gun. Otherwise, though, the two rifles are quite different mechanically.

Disassembly:

1. Remove the magazine. Open the bolt, depress the bolt stop button on the receiver, and take out the bolt toward the rear.



2. Remove the screws at the front and rear of the trigger guard. Hold the guard unit in place, and take the barrel and receiver out of the stock.



3. Remove the trigger guard unit downward, taking care to avoid losing the magazine tension springs on each side.



4. The magazine tension springs are easily lifted out of their slots in the trigger guard unit.



5. To take out the magazine catch, carefully remove the C-clip on the left end of its crosspin, and push the pin out toward the right. Control the spring tension. After the rear catch and its spring are removed, the sidebars of the front catch can be spread very slightly out of their recesses, and that unit is taken off upward and toward the front.

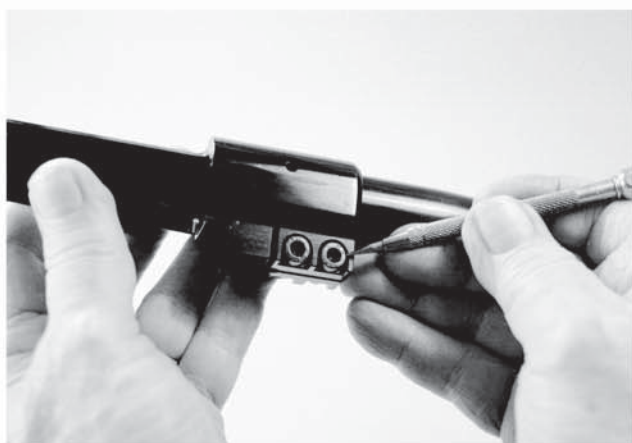
- 6.** In the stock, there are bedding blocks at front and rear. Nudge the rear one upward from below, and lift it out.



- 7.** The front bedding block is taken out in the same way.



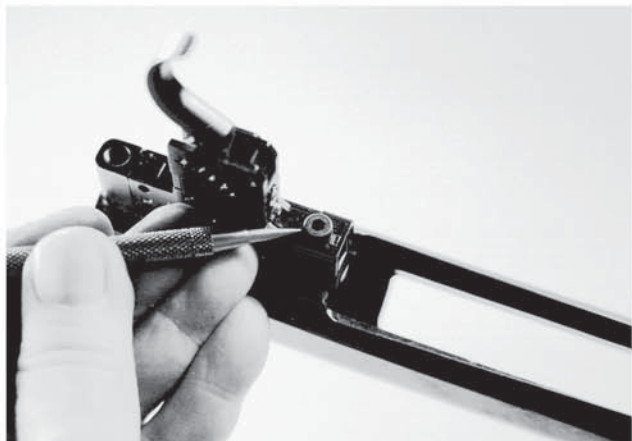
- 8.** To remove the barrel from the receiver, an Allen wrench is used to take out the two cross-bolts. The receiver can then be nudged off the barrel toward the rear.



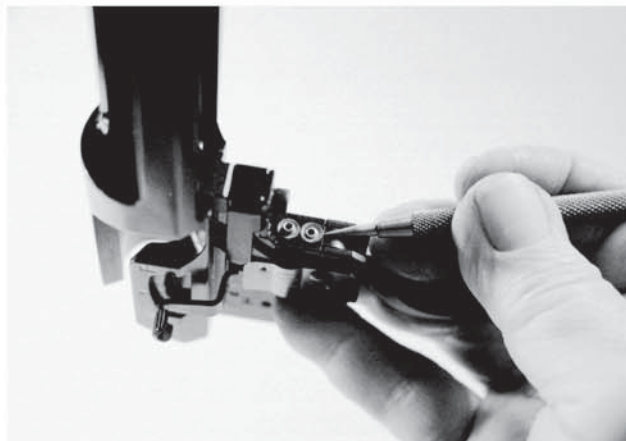
- 9.** As with most current guns, the factory discourages disassembly of the sear and trigger mechanism. That said, here is the way to proceed if it is absolutely necessary. First, use a roll-pin drift of the proper size to remove the crosspin at the rear of the unit.



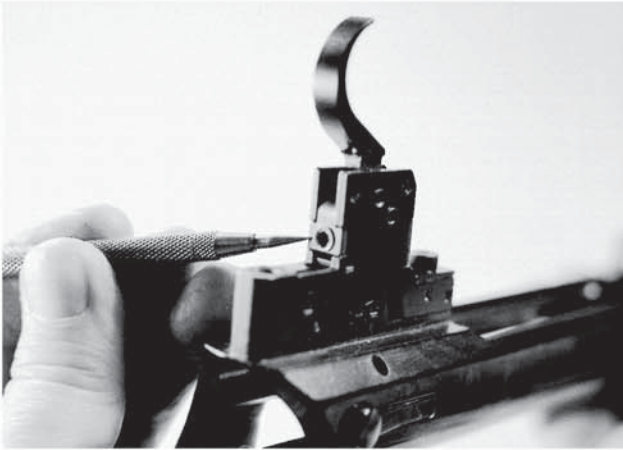
- 10.** Removal of this Allen screw at the front will allow the trigger group to be taken off the receiver. A metric hex-wrench will be needed. Removal of this unit should be done only for purposes of refinishing.



- 11.** At the front of the trigger unit are adjustment screws for spring tension and over-travel. They are set at the factory, and heavily sealed in place. If anything is amiss here, the rifle should be sent to SIGArms or an authorized repair facility.



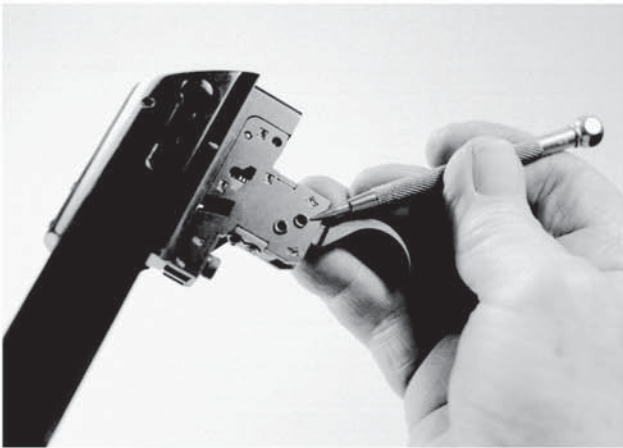
- 12.** This advice also applies to the sear engagement adjustment screw at the rear of the unit.



- 13.** The trigger and the sear prop are pivoted on two crosspins that go through the safety detent spring and across to the left side of the unit.



- 14.** On the left side, the crosspins are heavily riveted in place, and are not routinely removable.



- 15.** The bolt stop and its spring can be taken off the receiver by drifting out the vertical roll-pin.



- 16.** To remove the extractor from the bolt, insert a small sharp tool between the extractor and its plunger, push the plunger rearward, and lift out the extractor. **CAUTION:** Control the plunger and spring, and ease them out. This is best done with the bolt gripped in a padded vise.



- 17.** Drifting out this roll-pin will release the ejector plunger and its spring toward the front. **CAUTION:** Control the plunger and spring. Again, this should be done with the bolt body in a padded vise.



- 18.** Removal of the striker/firing pin system from the bolt requires special tools, and if there are any problems with this unit, it should be sent to SIGArms.

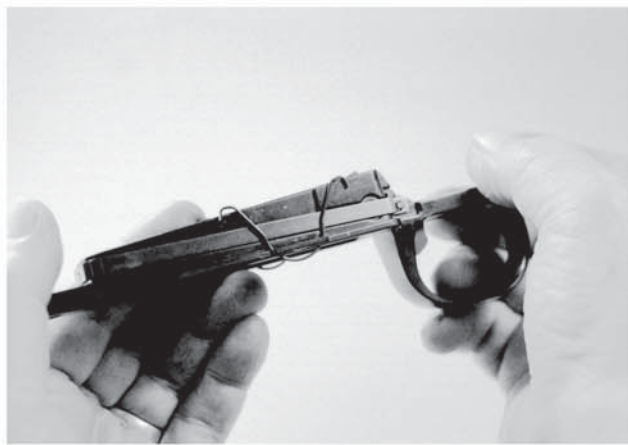


- 19.** The beautifully made magazine is not routinely dismountable.



Reassembly Tips:

- 1.** When installing the rear action bedding block in the stock, note that the screw hole goes to the rear.
- 2.** Put the magazine tension springs in their slots in the trigger guard unit as shown, and keep the unit level as it is reinserted.





Springfield M1A

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the Springfield M1A also apply to the following guns:

Springfield SOCOM 16

Springfield SOCOM II

Springfield SOCOM M1A Scout

U.S. M-14

Springfield M21 Tactical

Polytech M14S

Data: Springfield Armory M1A

Origin: United States

Manufacturer: Springfield Armory, Geneseo, IL

Cartridge: .308 Win.

Magazine Capacity: 20 rounds

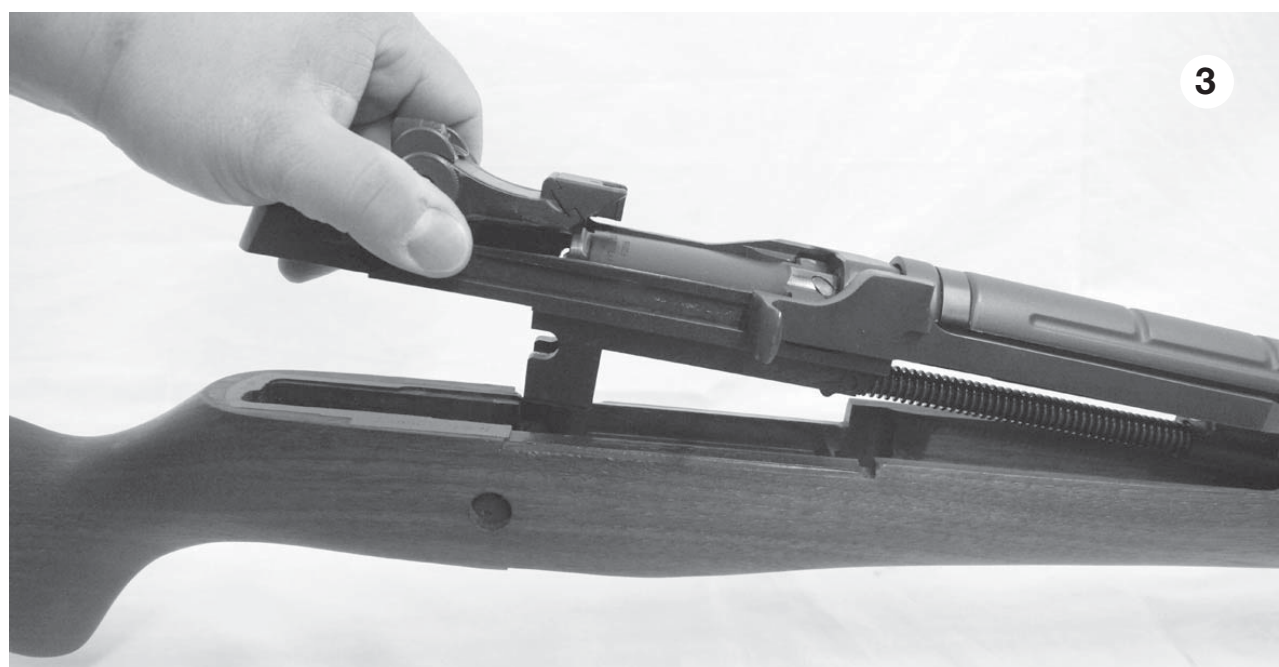
Overall Length: 44.33 inches

Barrel Length: 22 inches

Weight: 9.3 pounds

The U.S. Military M-14 rifle is available to civilians in semi-automatic form from Springfield Armory. Several slightly altered versions are marketed, as well, usually with a shorter barrel and modified muzzle attachment. These variations should pose no particular difficulty for the disassembler. Other than this, all the existing copies of the M-14 should follow these steps with little or no deviation. National match rifles are also available and should be no exception.

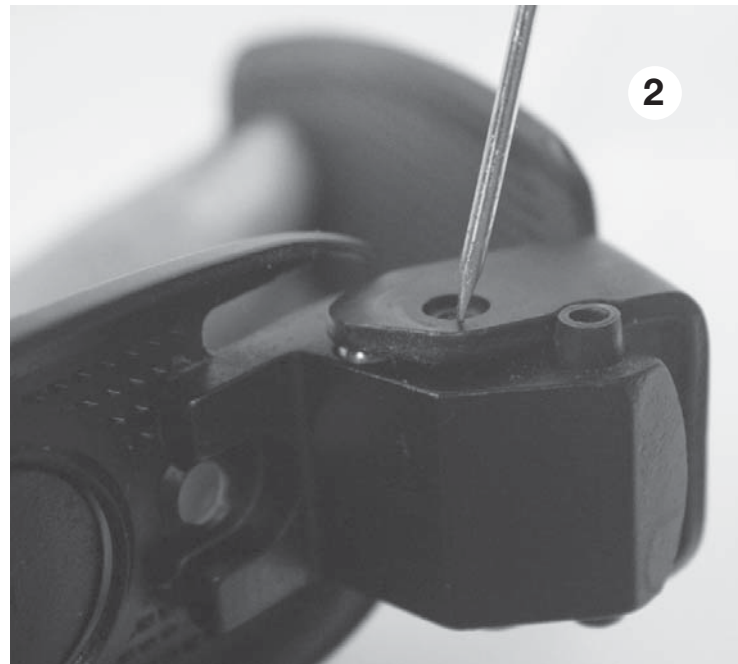
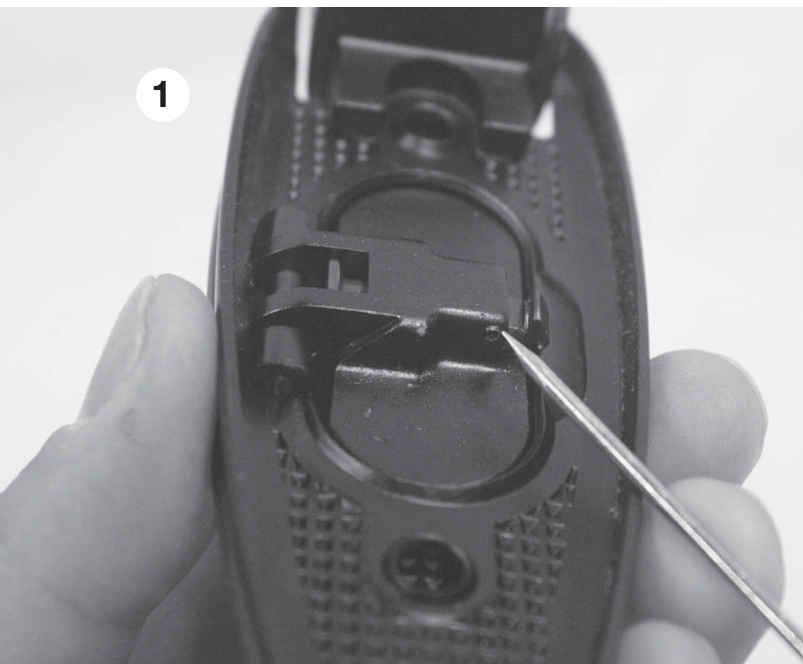
Disassembly:



- 1** Pull the rear of the triggerguard back and then down (picture1). This will rotate the entire triggerguard to unlock the trigger housing. Pull the trigger housing down and out of the receiver (picture 2). Pull the receiver up and then back to separate the action from the stock (picture 3).

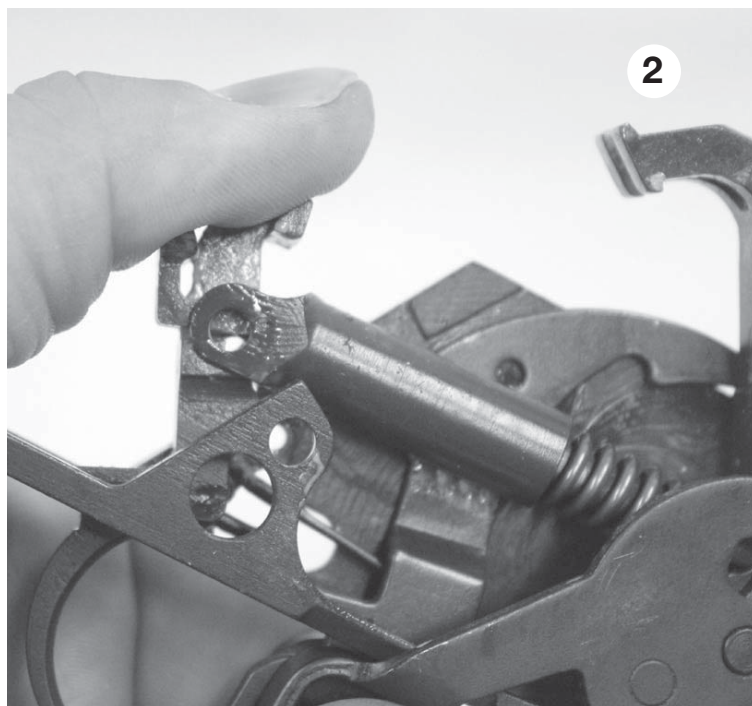
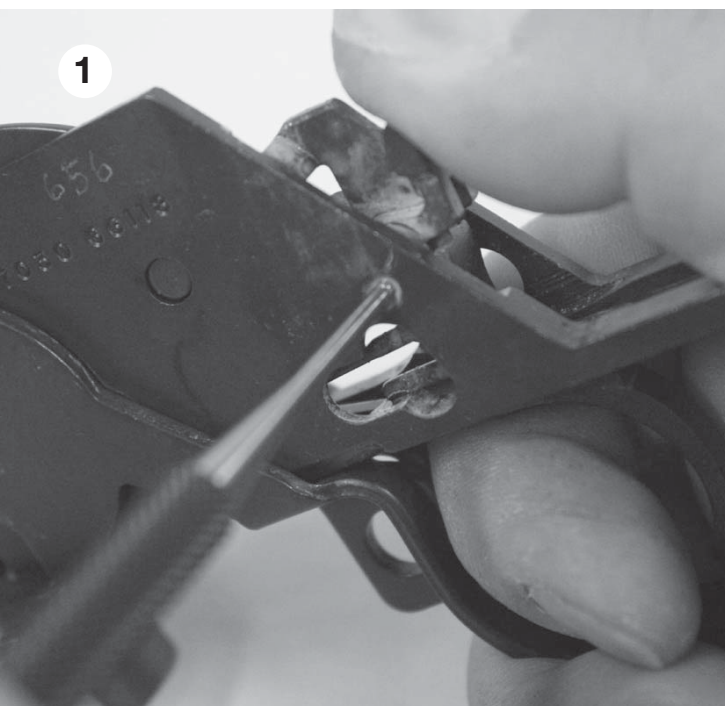


- 2.** The buttplate assembly can be removed by taking out these two screws. The rear sling swivel is retained by the bottom screw and will fall out when that screw is removed.



- 3.** If elements of the buttplate assembly need to be replaced, removal of two pins will remove or disassemble the door. Indicated is the small spring pin that contains the latch. The hinge pin is just to the left and can be driven out to remove the door (picture 1). The pivoting plate can be removed by driving out this large roll pin (picture 2). Visible between the pivoting plate and the buttplate is the detent ball bearing, beneath which is the spring.

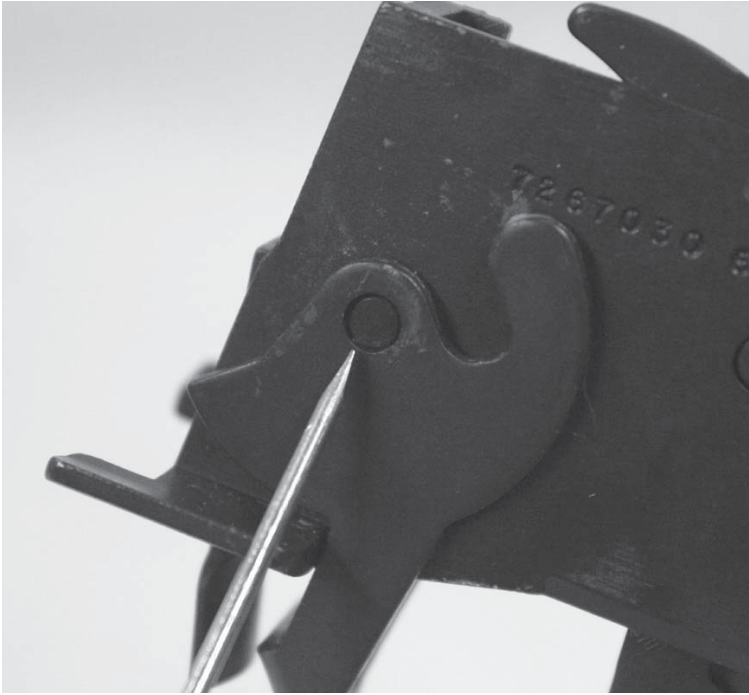
- 4.** With the hammer forward, push out the trigger pin (picture 1). In a controlled fashion, release the disconnecter and hammer spring and plunger tube so that they can be removed up and to the rear (picture 2).



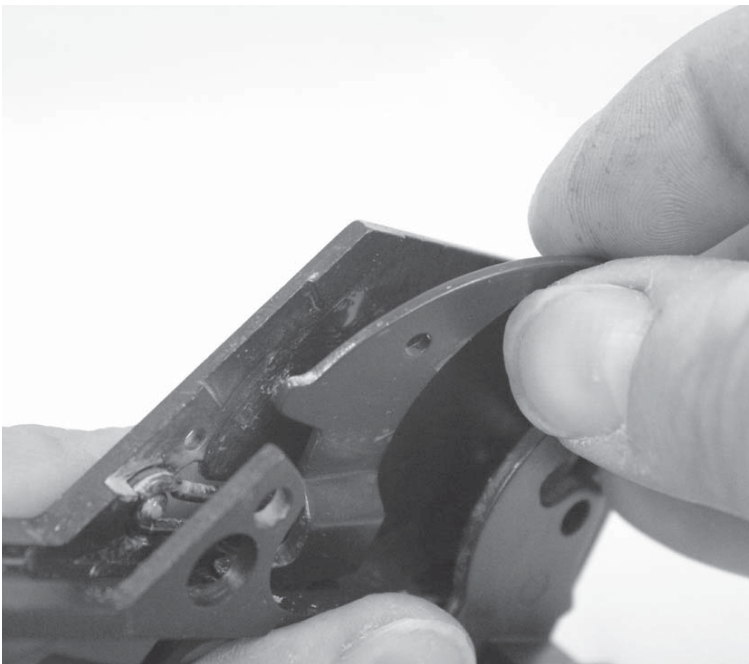
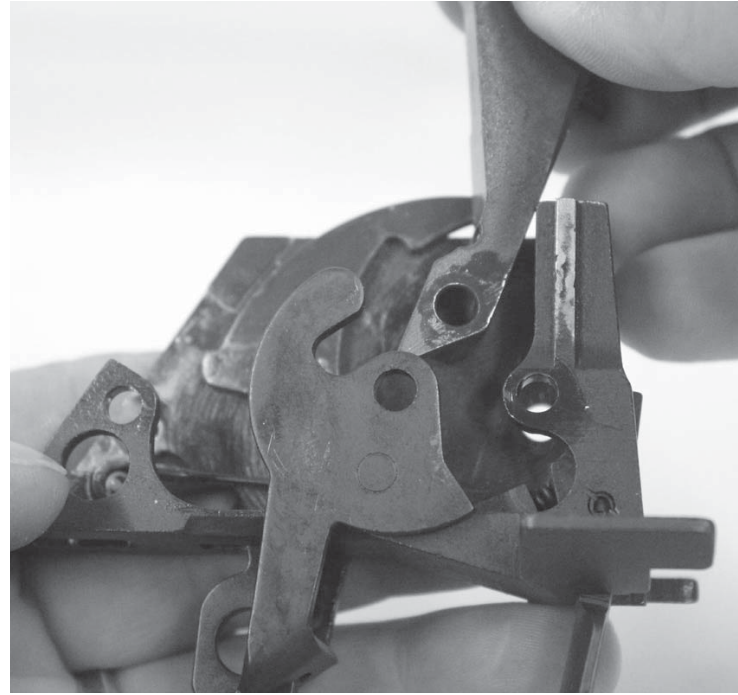
- 5.** The disconnecter can be removed from the trigger by driving out this pin. However, the pin is staked and the disconnecter should not be removed unless it needs to be replaced.



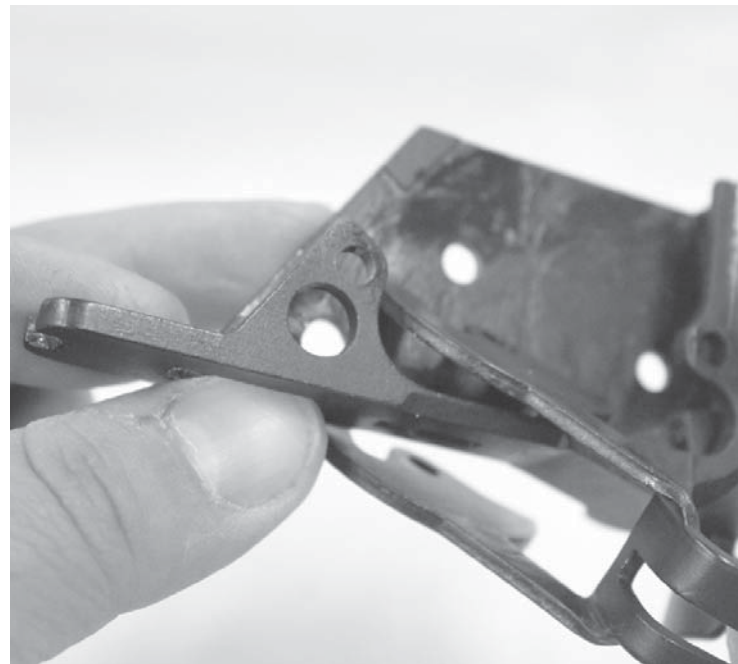
- 6.** Tap out the hammer pin ifrom left to right.



- 7.** Remove the hammer. The trigger guard will be loose but cannot be removed until the safety lever is removed first.

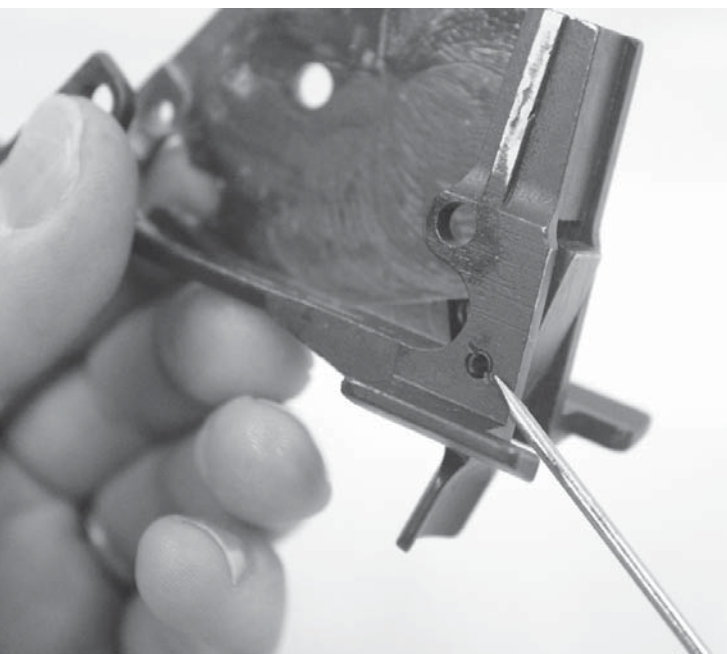


- 8.** Tip the top of the safety bar to the right to dislodge its pin from the hole in the housing and lift it up out of the housing. The safety spring will also then be loose and can be removed at this time.

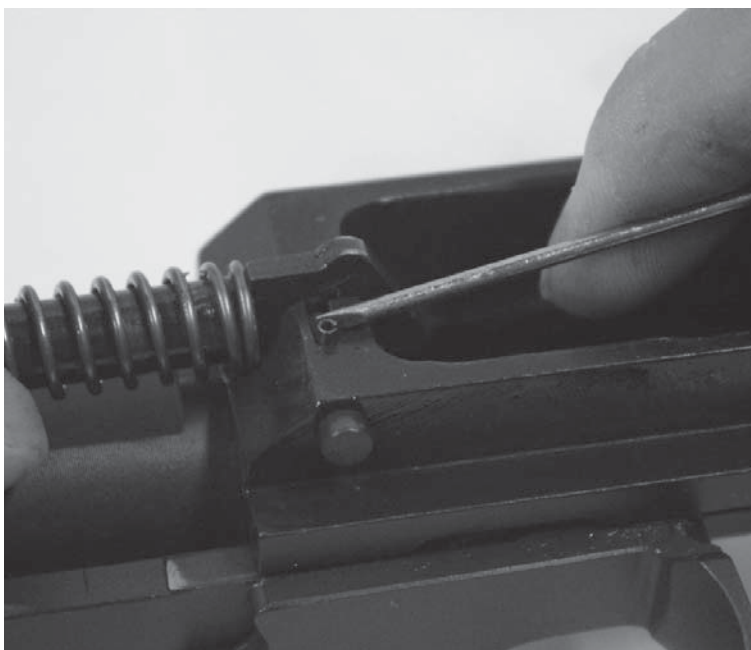


- 9.** Remove the triggerguard by rotating it down and then turning it to the right to fit the pin portion around the beveled section at the bottom of the housing.

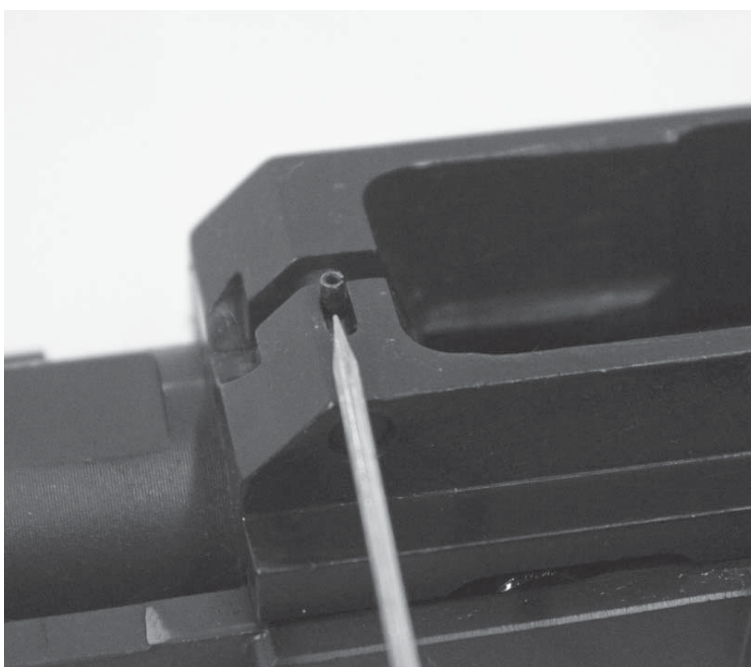
- 10.** The magazine catch pin is heavily staked and should not be removed unless repair is necessary. The pin should be re-staked upon reassembly.



- 11.** Pull the small roll pin adjacent to the recoil spring guide rod to the side of the receiver. This pulls the rod's retaining pin out of the rod.

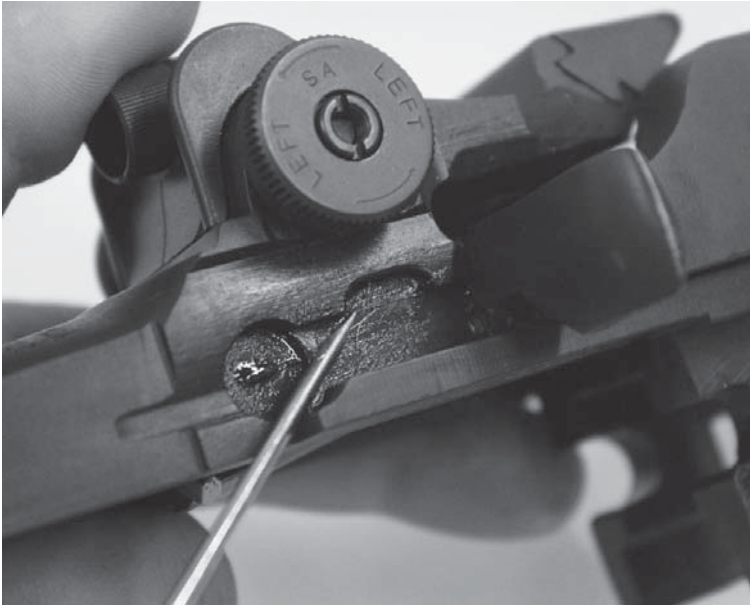


- 12.** Lift the guide rod up and then back and pull the rod and spring from the operating handle's spring guide tube.

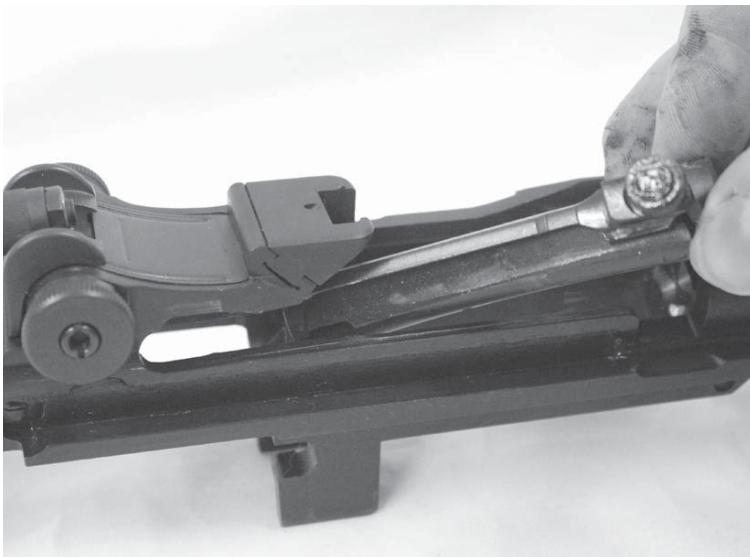


- 13.** This pin must be pulled out of the cross pin in order for the cross pin to be removed. Unless there is damage, this is not required.

- 14.** The very rear of the operating handle has a tab that interacts with this step in the slot. Align the tab with the step and rotate the charging handle down slightly while pulling it out. This will dislodge the operating handle from the slot and the bolt from the handle.



- 15.** Pull the operating handle all the way to the back and then angle it out to the right to remove it from the action.

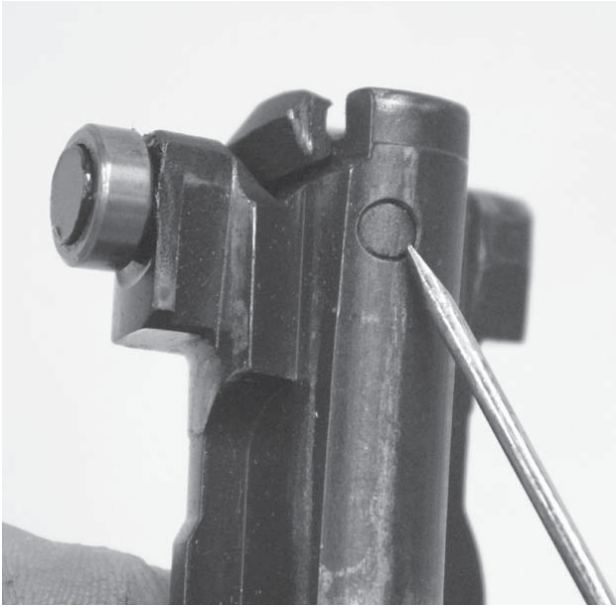


- 16.** Pull the bolt assembly forward and angle it so that the roller is angling up. Then angle it out to the right so that the firing pin tail clears the lower bridge of the receiver and the bolt can be removed from the receiver.

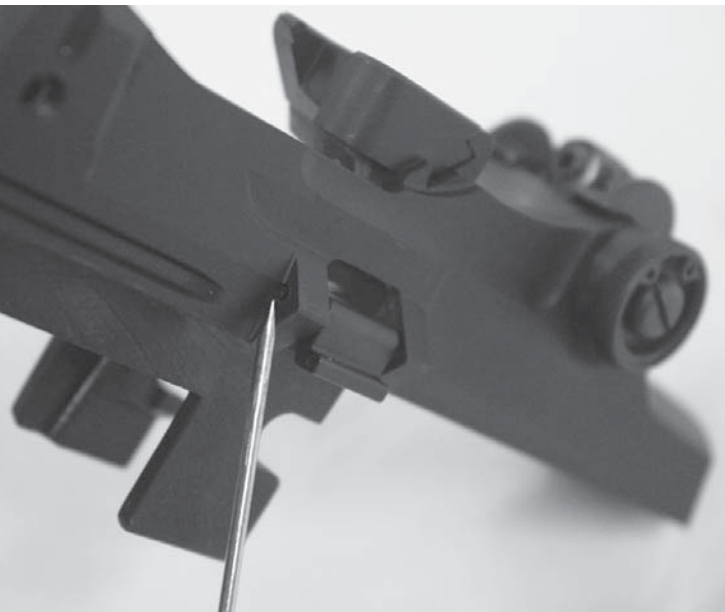


- 17.** The bolt roller can usually be replaced by simply popping or prying it off the bolt (many cannot and must be ground to be removed). There is a small ring-type spring inside of it. Do not attempt this unless replacement is required, as the lug underneath can be damaged easily, particularly if the roller is stubborn.

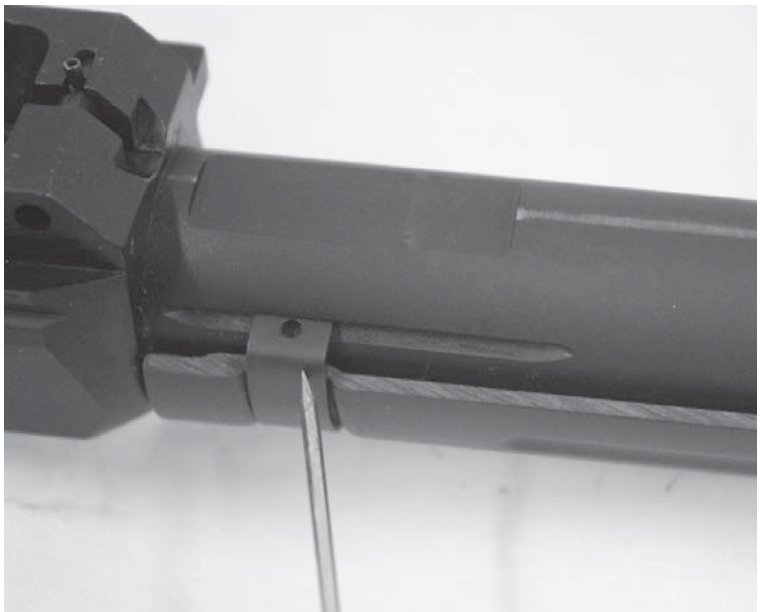
- 18.** Disassembly of the bolt is more easily accomplished with the special tool available from multiple sources. This pin (which is part of the extractor) must be pushed out. This will free the extractor and its detent and spring, as well as the ejector and spring. The ejector spring is quite powerful, and care should be taken to control the ejector as it is removed.



- 19.** The parts of the bolt assembly are shown here. The extractor detent and spring are still contained in their hole.

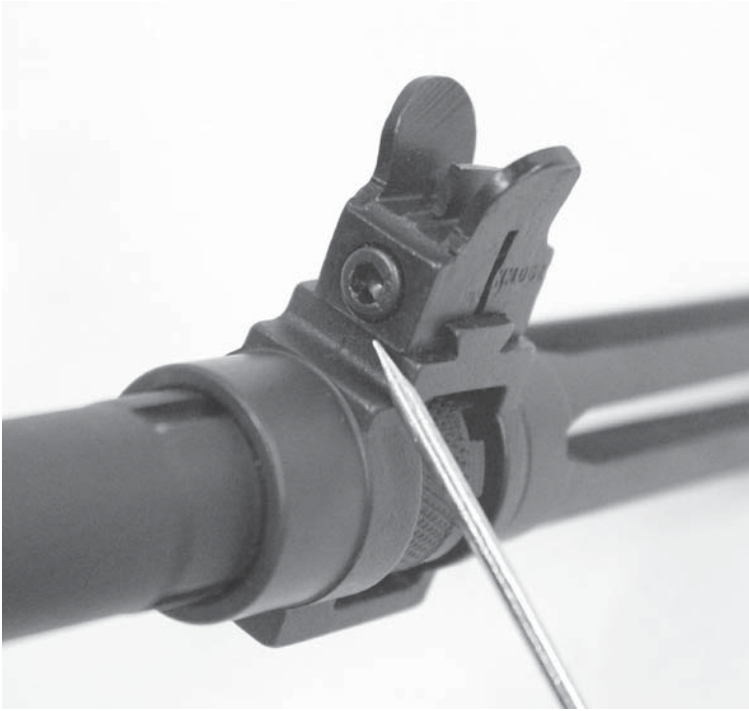


- 20.** The bolt stop and spring can be removed by driving out this pin toward the rear.

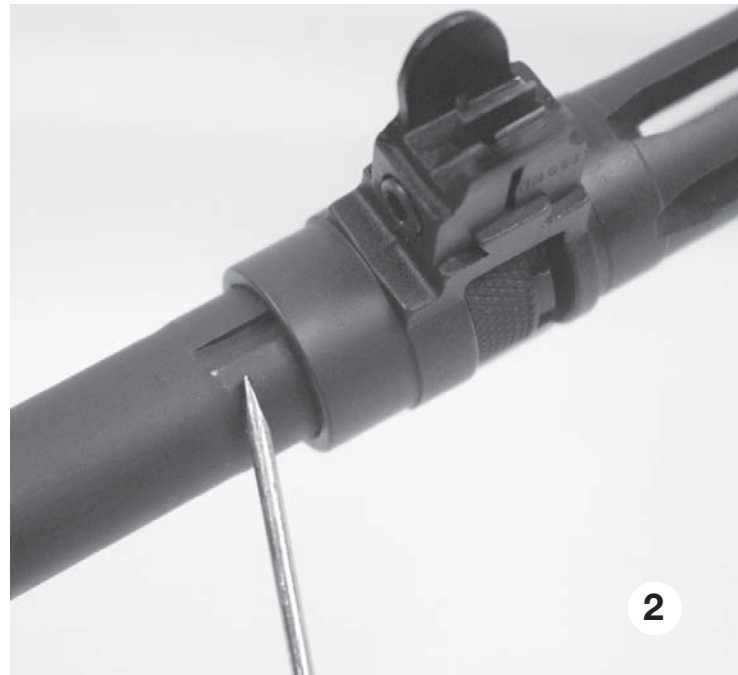
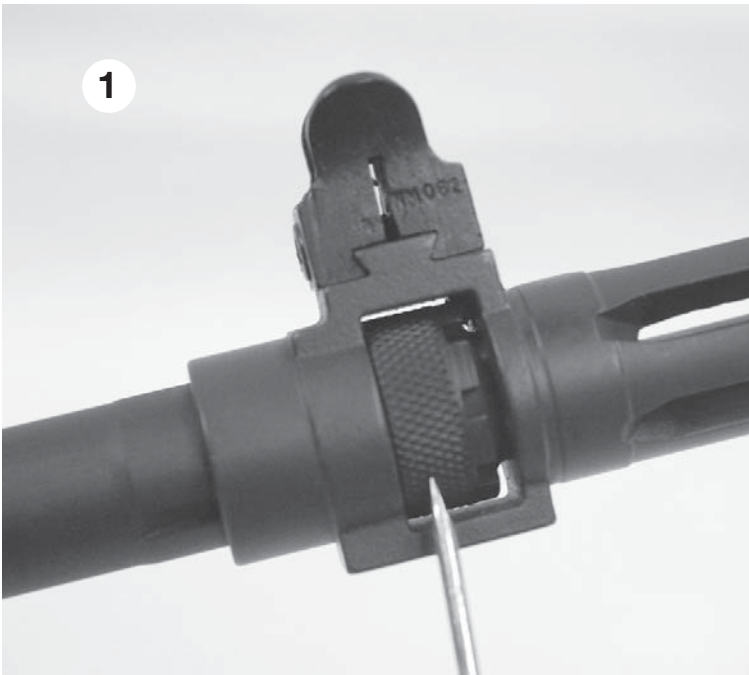
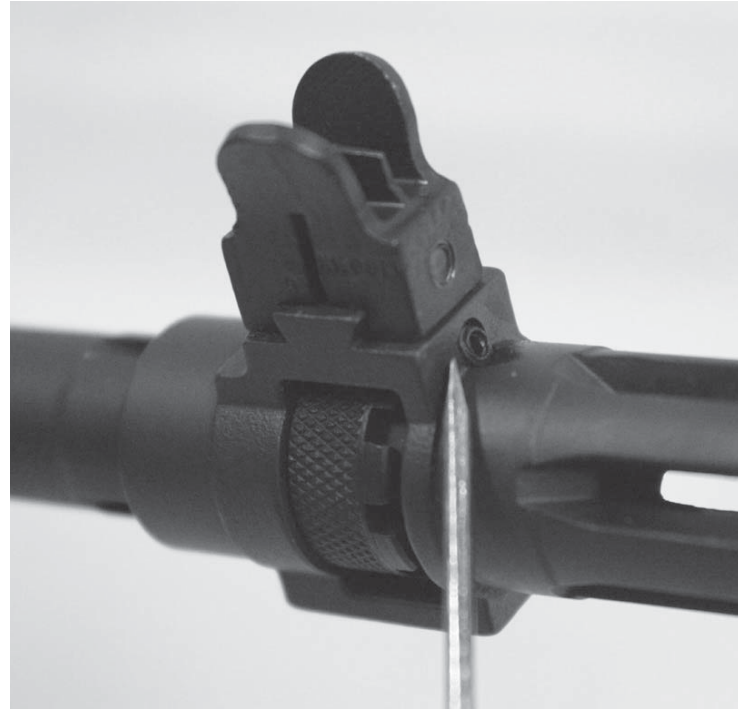


- 21.** The handguard can be removed by prying this clip out of its slot and pulling the rear of the handguard upward. The handguard then can be pulled back slightly to clear the front handguard ring and removed.

22. The front sight can be removed by removing this screw and drifting the sight off the dovetail.

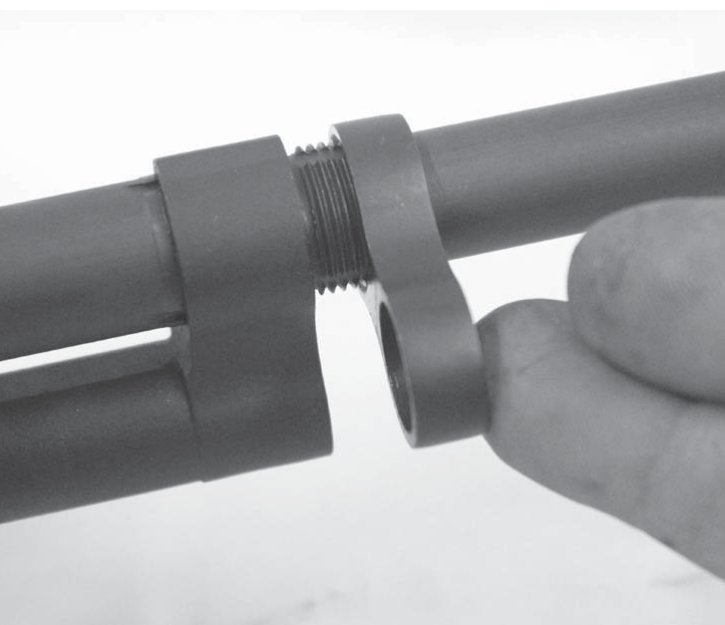
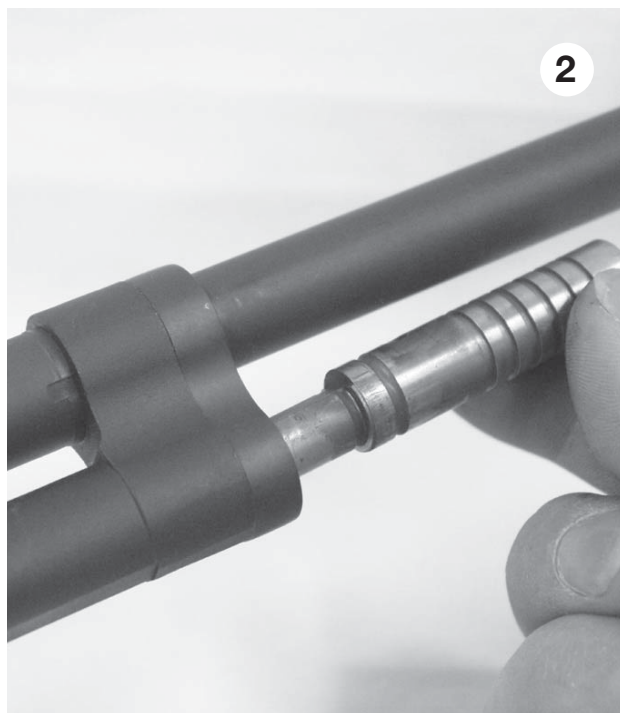
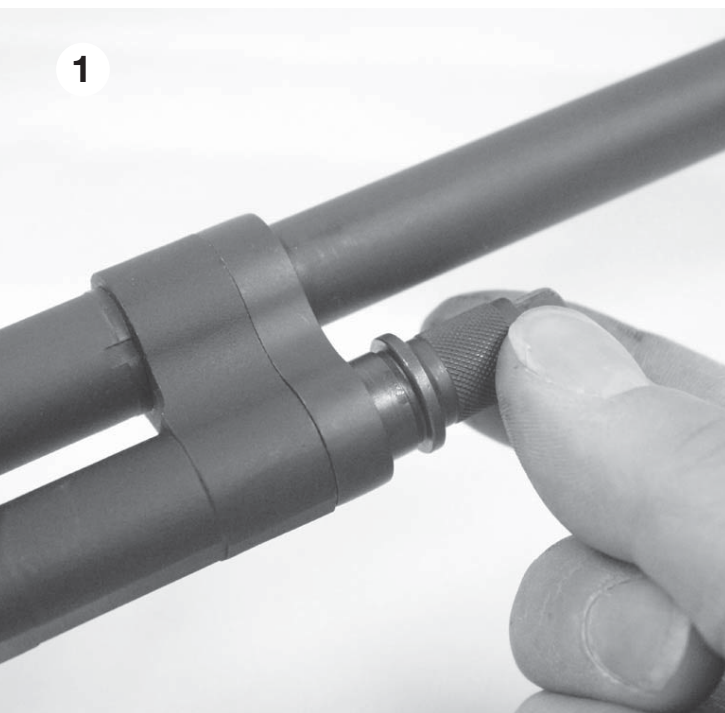


23. Remove this set screw to unlock the flash hider nut.

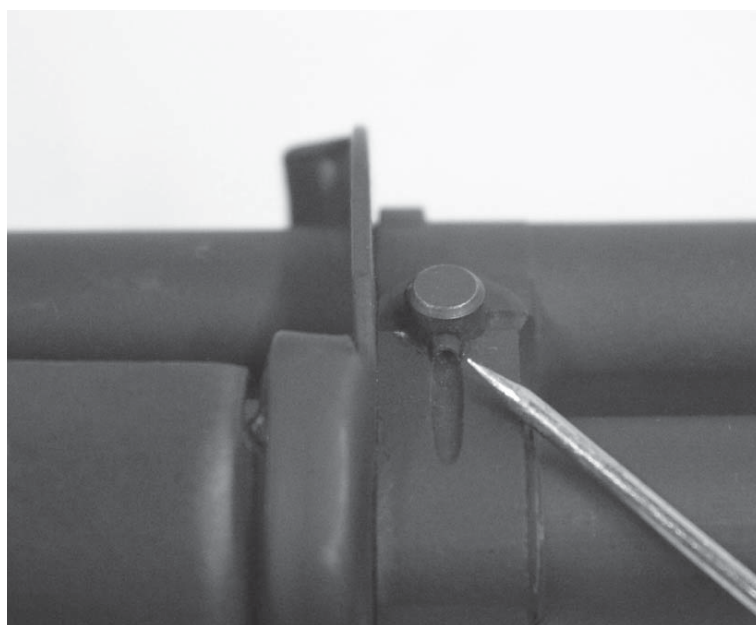


24. The flash hider nut (picture 1) can be unscrewed. As it is unscrewed, the entire muzzle attachment will move forward off the three-barrel splines (picture 2) and off the barrel entirely. This task is made much easier by use of the specialty M-14 wrench designed for this purpose.

- 25.** Unscrew and remove the gas plug (picture 1), and then the piston can be removed from the piston cylinder (picture 2).



- 26.** The following disassembly steps should only be used if the gas cylinder or one of its parts needs replacement. The flash hider must be removed before this is done. Unscrew the cylinder lock and remove it from the barrel.

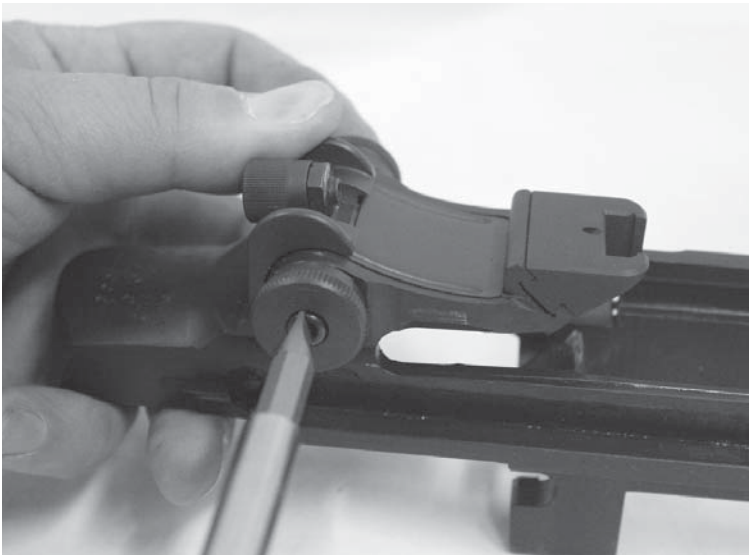
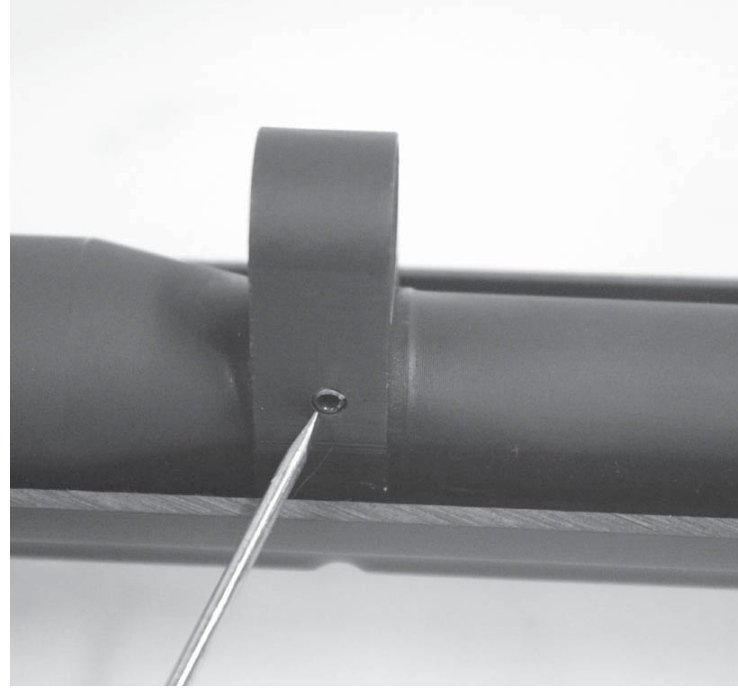


- 27.** To remove the spindle valve, drive out this pin. The valve and spring will be removed from the other side of the gas cylinder.

- 28.** The gas cylinder assembly can now be tapped off the barrel. This unit also rides on splines cut into the barrel.



- 29.** The operating rod guide can be removed by driving out this pin and tapping it forward and over the muzzle.

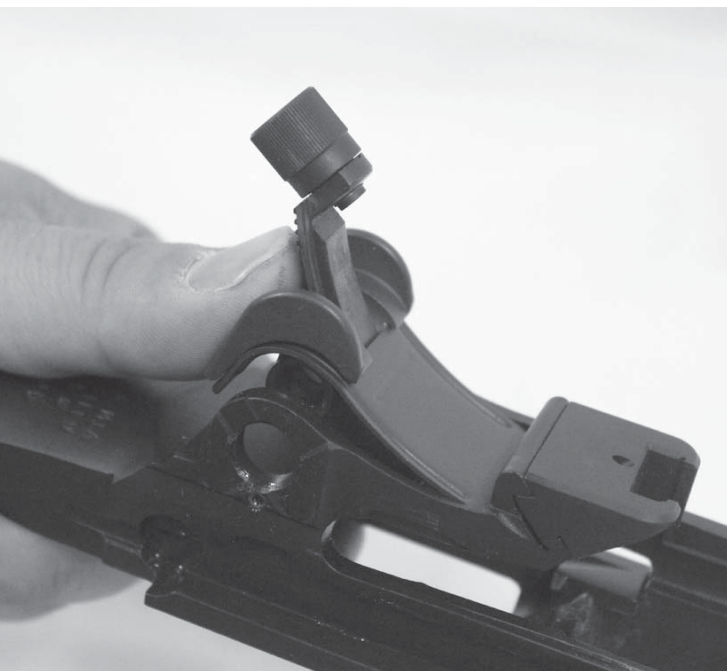


- 30.** To disassemble the rear sight, push in on the left side (elevation) screw while unscrewing the screw in the face of the right side (windage) knob until it is fully loose.



- 31.** Pull the left side knob from the assembly, then unscrew and remove the right side knob from the sight base. Beneath the right side knob is a detent ball and spring. Do not lose them. Do not remove the screws from either side knobs. There is a split ring spring clip in the left side knob that should also be left installed.

- 32.** Pull the rear sight aperture most of the way up and then push forward and up on the rear of the assembly below the aperture to pop it out of position.



- 33.** The sight assembly parts, disassembled.



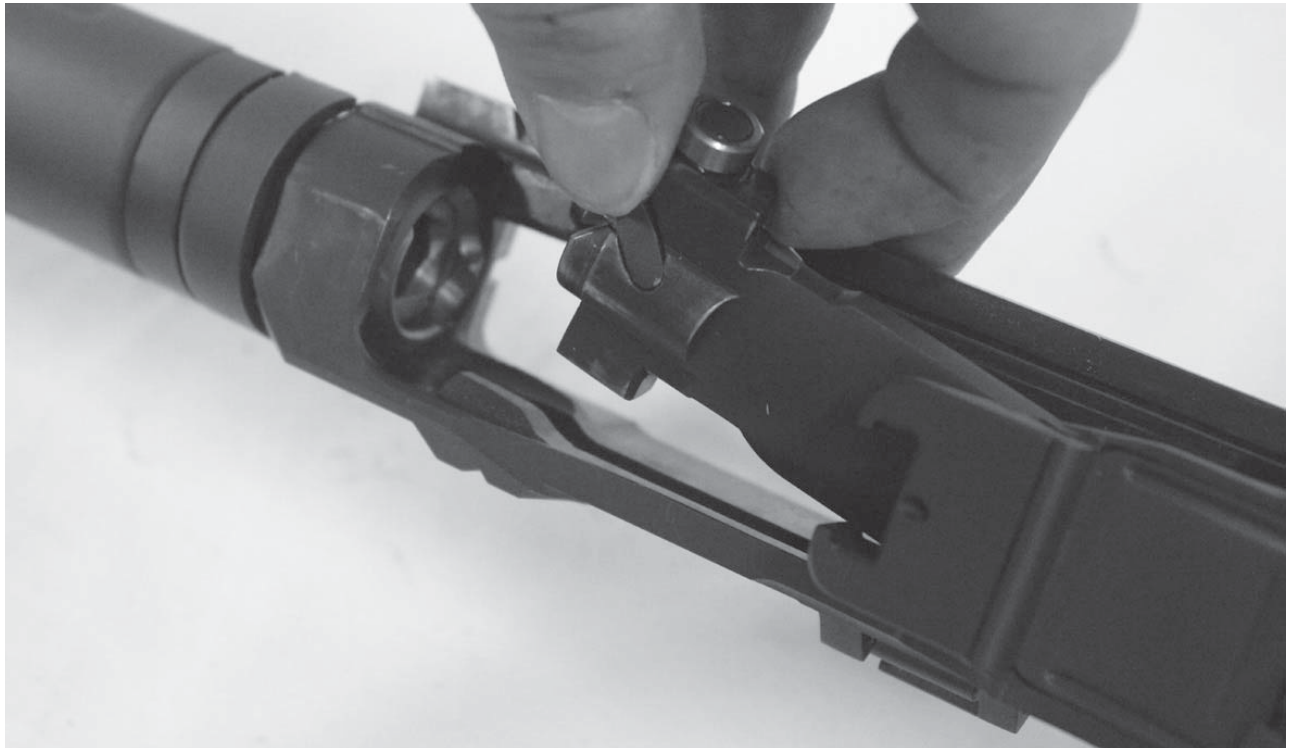
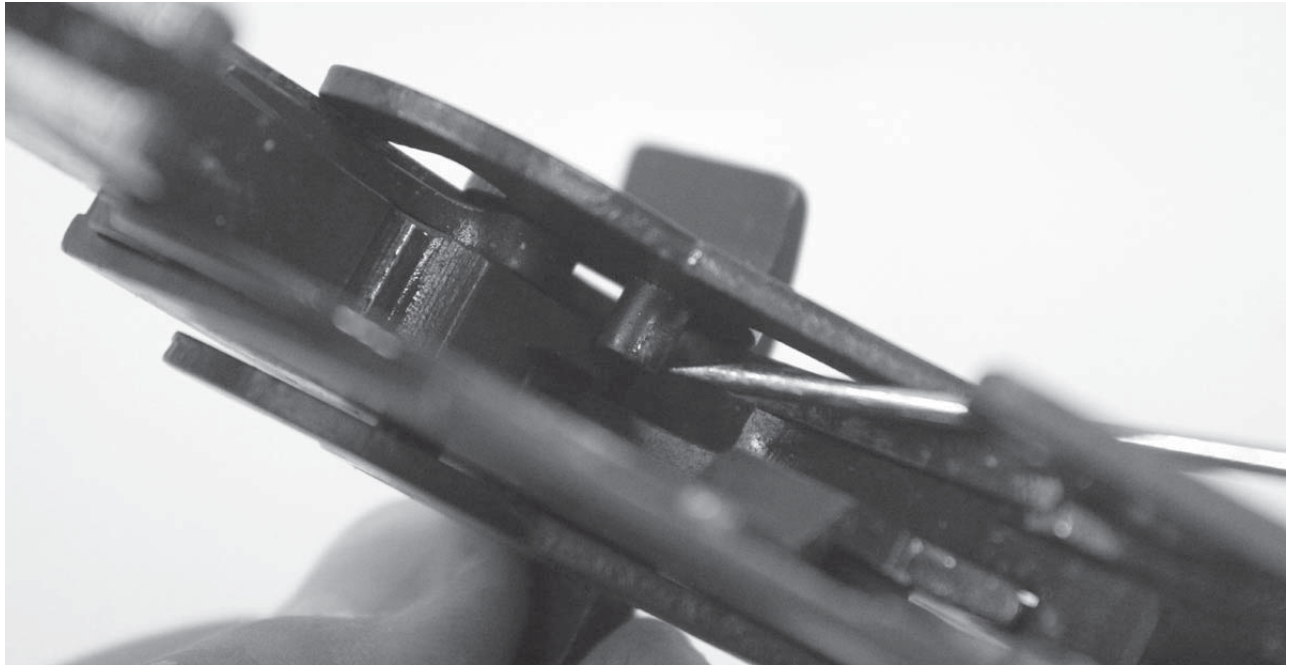
- 34.** The magazine is disassembled by lifting the rear of the floorplate and pulling it to the rear and out of its slot in the magazine body.



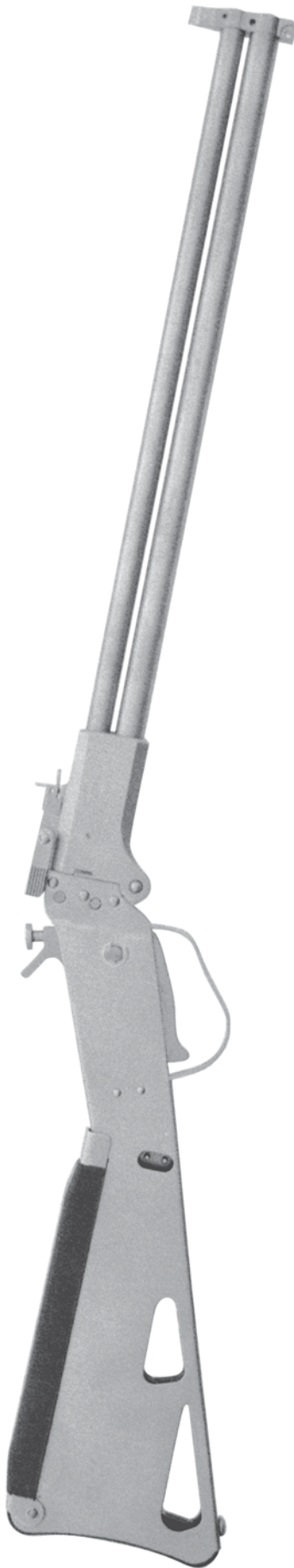
- 35.** The follower should be tilted to clear the floorplate tabs on the body to remove it and the spring.

Reassembly Tips:

1. The pin projection on the inside of the right triggerguard arm should be behind the tab on the bottom of the hammer. This pin cocks the hammer when the trigger guard is pulled down.



2. When reinstalling the bolt, angle it in such a fashion so that the left lug will slide down into its slot and the rear of the bolt clears the lower receiver lug.



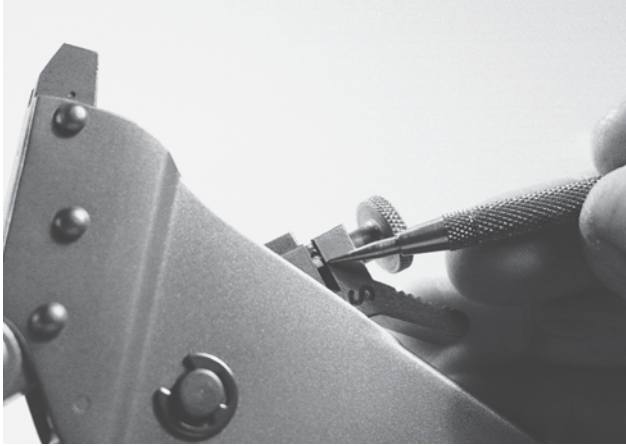
Springfield M6 Scout

Data: Springfield M6 Scout
Origin: CZ, Czech Republic
Importer: Springfield, Inc.,
Geneseo, Illinois
Cartridge: 22 LR, 22 Hornet, 410
Overall length: 32 inches
Barrel length: 18-1/4 inches
Weight: 4.5 pounds

This neat little rifle/shotgun combination began several years ago as a survival piece for U.S. Air Force pilots. Springfield, Inc., first offered a civilian version in 1982. Since 1995 CZ has made it for them. The original versions had no trigger guard. The current version has a guard and there have been other little mechanical improvements along the way.

Disassembly:

1. Cock the hammer and set the striker block on the hammer in the on-safe position. Uncock the hammer.



3. Restrain the hammer, and push out the crosspin. The opposite C-clip can stay in place.



5. In normal takedown, the hammer/selector/safety system is best left in place. If necessary for repair or refinishing, begin disassembly by turning the knob to off-safe, and push it down to its lower (shotgun) position. Remove the small Allen screw at the lower end of the selector shaft.



2. Use a non-marring brass, copper or aluminum tool to carefully remove the C-clip from one end of the hammer crosspin (either side). Control the C-clip as it is taken off, to avoid loss.



4. Remove the hammer assembly upward.



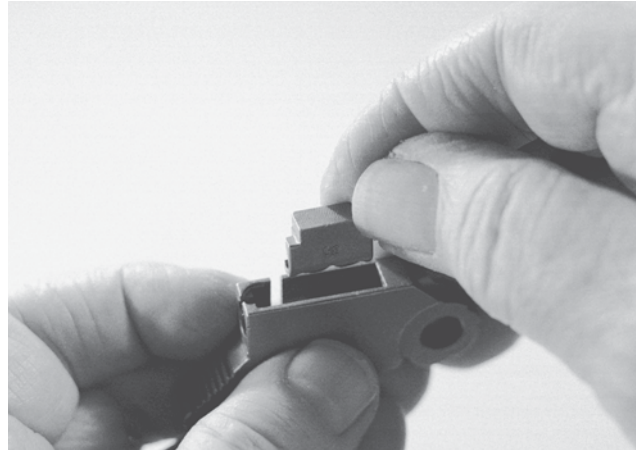
6. Use a regular screwdriver to unscrew and take out the slotted lower tip of the selector.



- 7.** Restrain the striker block to keep its detent ball and spring in place. Turn the selector until its lug aligns with the exit out in the hammer, and remove it.



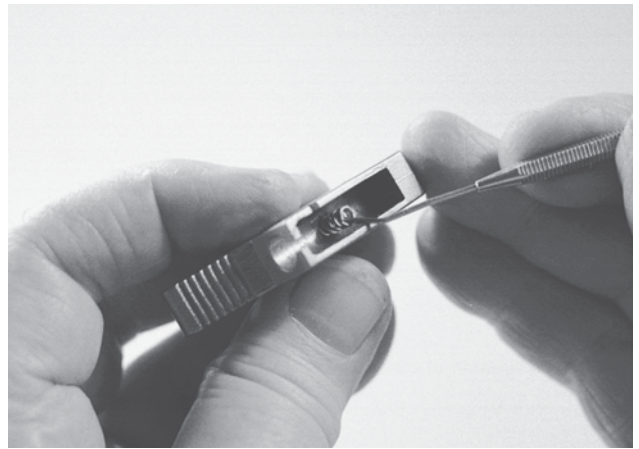
- 8.** Keep the hammer face level, slowly release the striker block tension, and lift it out.



- 9.** You can use a magnetized rod to lift out the detent ball, as shown, or just tip the hammer and deposit the ball in a parts tray. Either way, take care that the small ball is not lost.



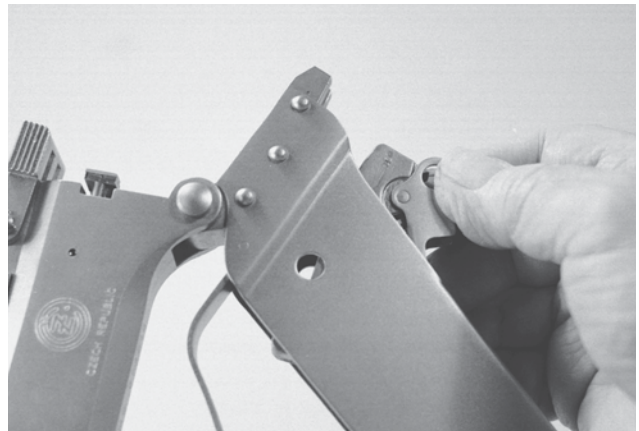
- 10.** Use a tool with a hooked tip to lift out the detent ball spring.



- 11.** The hammer spring and its guide may be caught in its mounting frame, attached to the trigger. If so, it is possible to remove the trigger and its attachments as a unit, taking care with the partially compressed spring. If not (**CAUTION**), free the guide and spring and remove them upward.



- 12.** Insert a tool at the rear of the trigger and push the assembly forward. Remove the trigger, trigger spring, and the attached hammer spring housing upward.



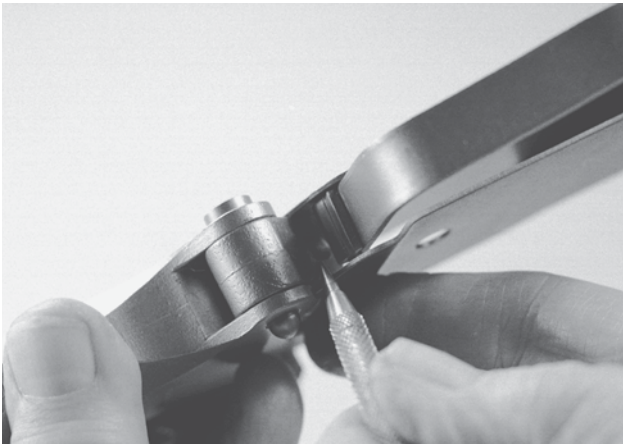
- 13.** If it is necessary to separate the trigger, spring and housing, this can be done by drifting out the crosspin.



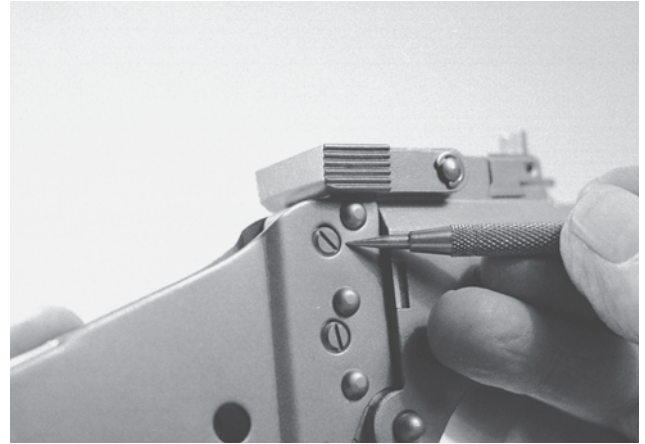
- 14.** It is possible to take off the trigger guard by drifting out this pin and unhooking it at the rear. However, the pin is finished-over, so this should be done only if necessary for repair.



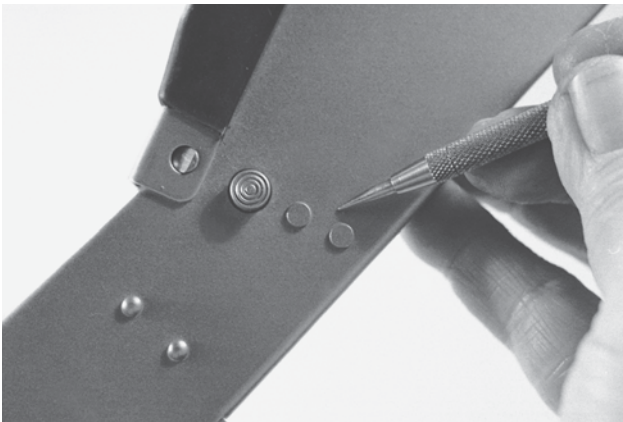
- 15.** If the guard is removed, it will give access to an Allen screw that retains the hinge-pin for the barrels. It should be noted that any attempt to drive out the hinge-pin without first removing this screw will result in great damage.



- 16.** The upper and lower firing pins and their return springs are retained by screws on the right side of the receiver. If these are taken out you must control the firing pins and springs.



- 17.** The latch for the cartridge storage unit in the buttstock is tempered to be its own spring. It is double-riveted in place, and is not routinely removed.



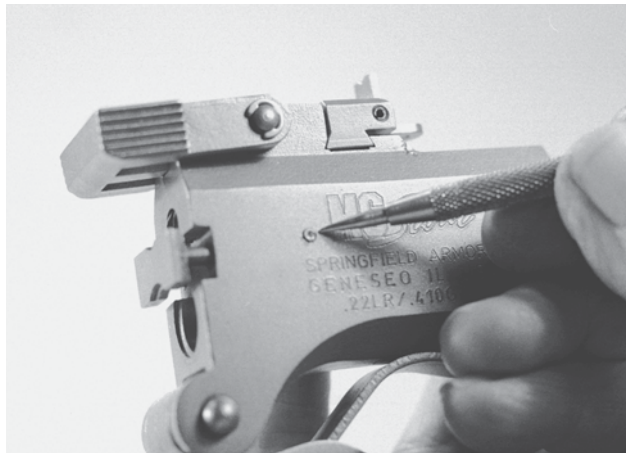
- 18.** If it is necessary to remove the lid of the cartridge storage unit, it is pivoted and retained by a crosspin. This pin can be taken out by careful removal of the small C-clip that retains it.



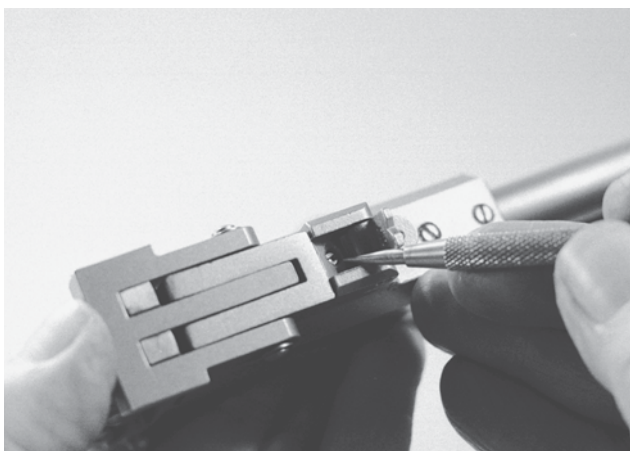
- 19.** If the lid has been taken off, and removal of the storage unit and butt-plate is necessary, it is released by taking out this large Phillips screw.



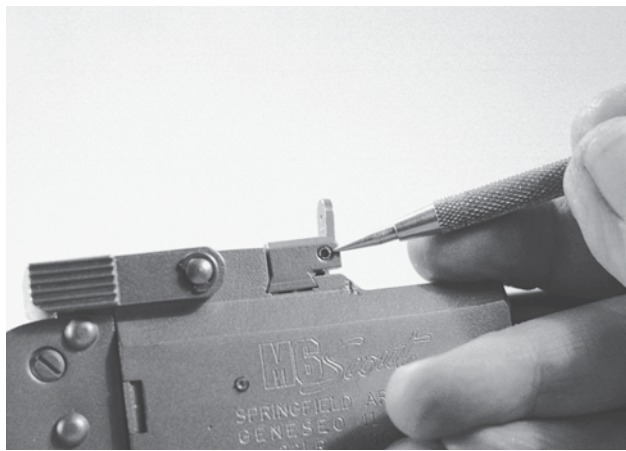
- 20.** The ejector and its twin springs are retained in the barrel unit by this roll-type crosspin. Control the ejector during removal.



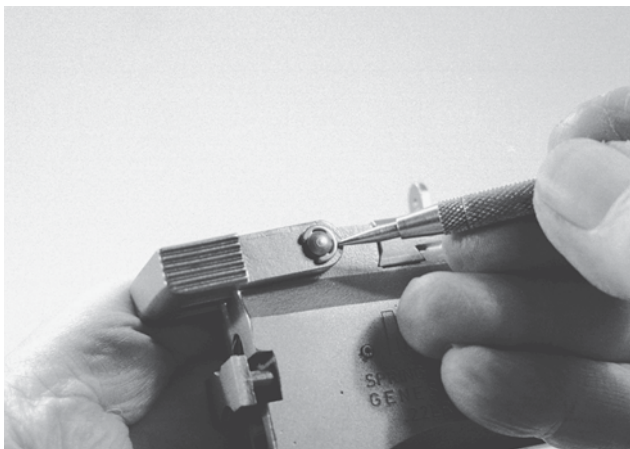
- 21.** Inside the top of the rear sight is a screw that will release the sight to move out of its dovetail mount. **CAUTION:** The detent ball and spring will be released.



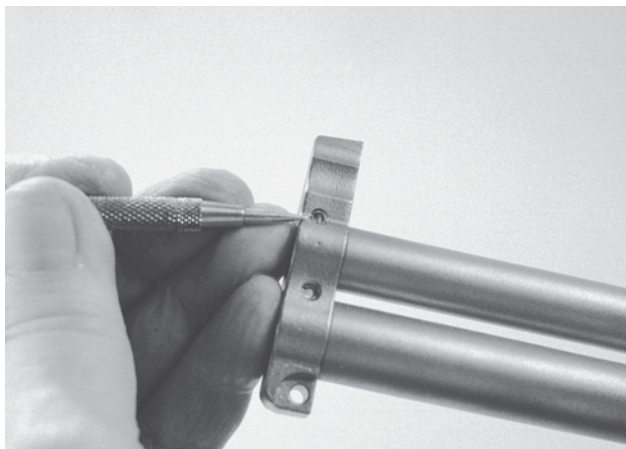
- 22.** It is also possible to take off the flip-over sight without removing the base, by drifting out this roll-type crosspin. Again, **CAUTION:** The detent ball and spring will be released.



- 23.** The barrel latch piece is easily taken off by removing the C-clip on either side, and pushing out the crosspin. **CAUTION:** The ball and spring will be released, so ease it off.

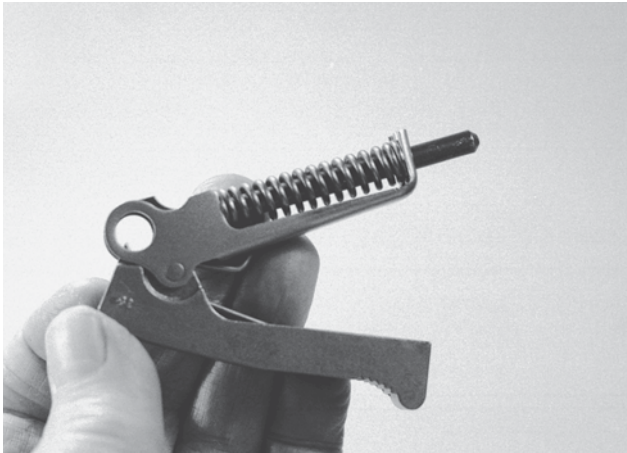


- 24.** If the front sight is ever damaged, and the barrel band must be taken off, it is retained by two roll-type crosspins, one above each barrel. After the pins are drifted out, nudge the band unit alternately at top and bottom for removal.

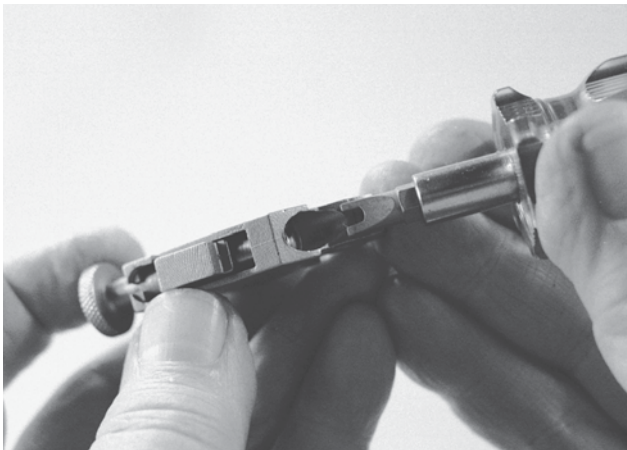
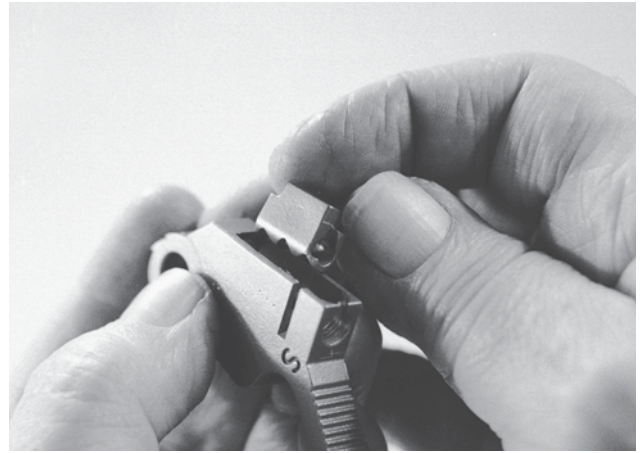


Reassembly Tips:

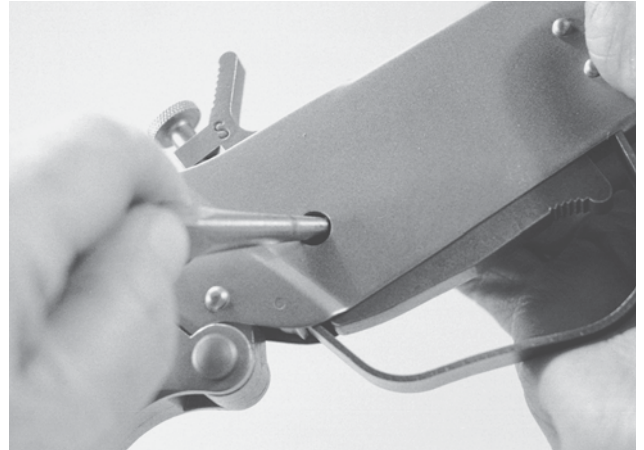
1. Before the trigger and hammer spring assembly is re-inserted, put the front of the hammer spring guide against the edge of the workbench and push it back to hook the spring behind the shoulders of the spring housing, as shown, then insert the entire assembly. Take care that the spring does not creep out of its housing. Be sure the rear tip of the guide enters its hole inside the stock. Insert a tool in front of the assembly to lever it rearward.



2. When the striker block is put back into the hammer, be sure it is inserted as shown, with the cut-away portion on the left side.



3. When reassembling the striker/safety system in the hammer, do not over-tighten the slotted end piece on the selector shaft. Be sure the knob can still be turned to place the lug in the safety slot. A twin-point bit is helpful for this. When all is in place, tighten the small Allen screw at the lower end.



4. Insert the harmer/trigger crosspin until it is just into one side of the trigger. Then, insert the hammer, and use a tool to position it before the crosspin is pushed through.



Steyr Mannlicher Scout

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the Steyr Mannlicher Scout also apply to the following guns:

Steyr Elite

Mannlicher Ultra Light

Data: Steyr Mannlicher Scout

Origin: Austria

Manufacturer: Steyr Mannlicher

Cartridge: .223 Rem., .243 Win., 7mm-08 Rem., .308 Win.

Magazine Capacity: 5 rounds

Overall Length: 19 inches

Barrel Length: 22 inches

Weight: 6.5 pounds

An evolution of the scout rifle concept, the Scout is a very good example of that school of thought, a lightweight, low boreline, bolt-action rifle utilizing low-power optics rather than iron sights as the primary sight system. The rifle has a very long scope rail that can accommodate both extended eye relief scopes, as well as traditional rifle optics. Three notable features include a very modular type of construction, a fore-end that folds down into bipod legs, and the ability to carry a spare magazine in the bottom of the buttstock. The basic mechanisms are common to most modern Mannlicher rifles with the SBS bolt system imported by Steyr Mannlicher International, though some of the ancillary steps will diverge somewhat with the more traditional looking and purposed Mannlicher rifles. The older SSG-69 based rifles are considerably different.

Disassembly:

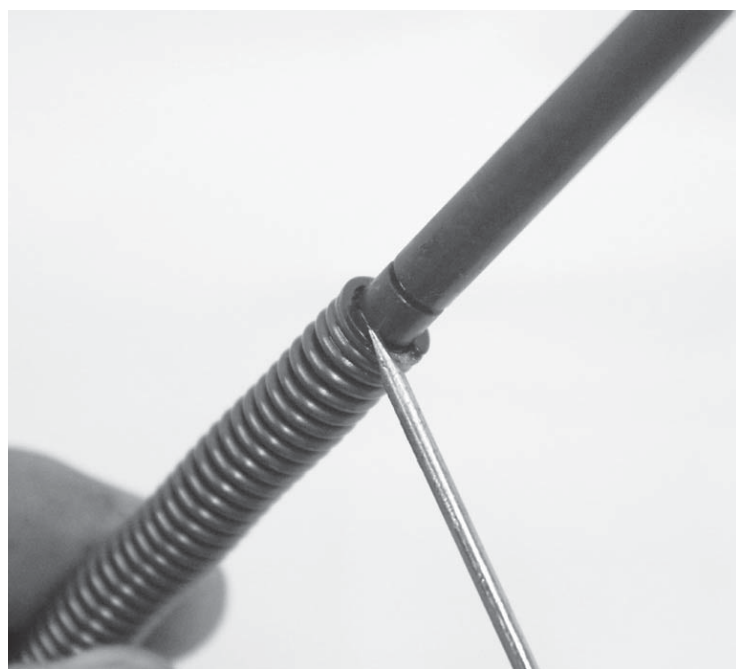
- 1.** To remove the bolt from the receiver, open the bolt and then put the rifle on safe, rolling the safety wheel fully to the rear. The bolt can then be pulled directly out the rear of the receiver.



- 2.** Depress the small tab (ratchet lever) in the bolt shroud and turn the firing pin assembly slightly clockwise (in the direction of the stamped arrow on the shroud). The entire assembly will come loose. Remove the shroud.



- 3.** Pull the firing pin assembly from the bolt body.



- 4.** This E-clip holds the firing pin assembly together. When removed, the firing pin spring and cam sleeve can be removed.

- 5.** This set screw on the bottom of the firing pin lug (cocking piece) retains the lug to the firing pin. Unless the firing pin or lug need to be replaced, this should be left in assembly.



- 6.** To remove the extractor, use a small screwdriver to lift and pull forward the looped extractor spring. When the spring is removed, the extractor will lift right out of the bolt.



- 7.** Drive out this pin to remove the ejector and its spring.



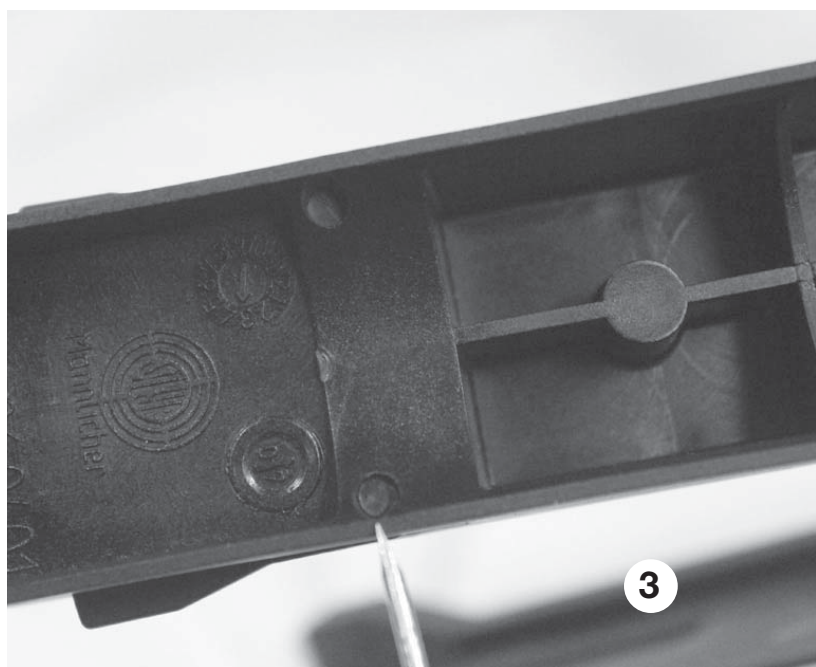
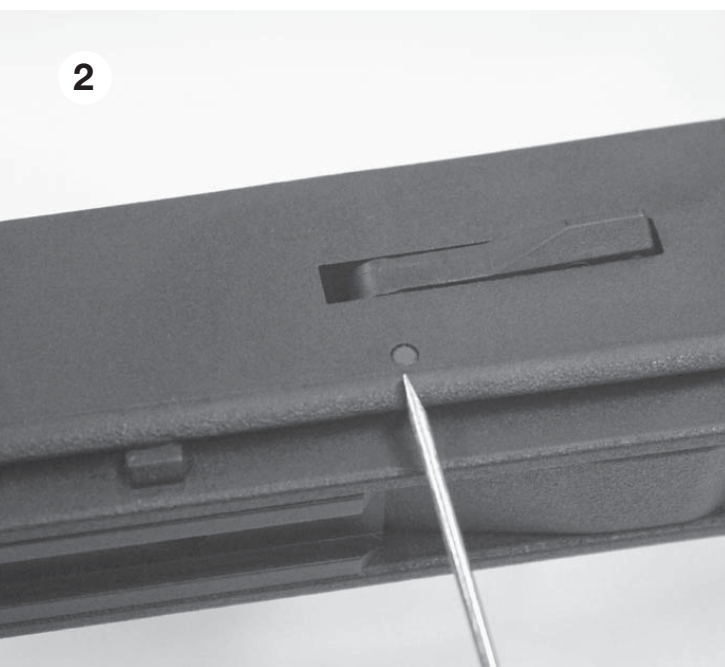
- 8.** Drive out this pin to remove the bolt shroud ratchet and spring.

- 9.** To begin removing the action from the stock, unscrew the two action bolts located in front of and to the rear of the magazine well. The shorter front bolt has a washer beneath it.

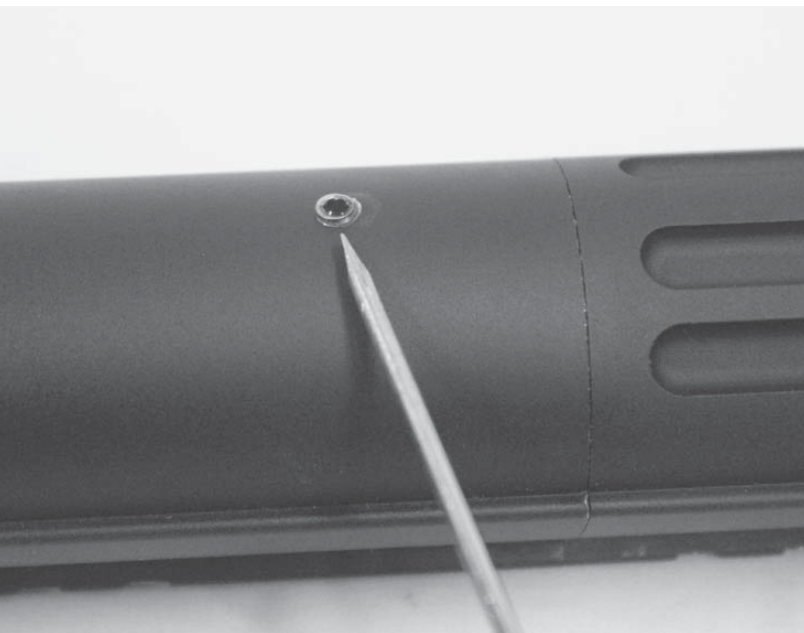


- 10.** Deploy the bipod legs of the fore-end and drive out this large pin. The absence of the pin will allow the action to be taken from the stock piece.

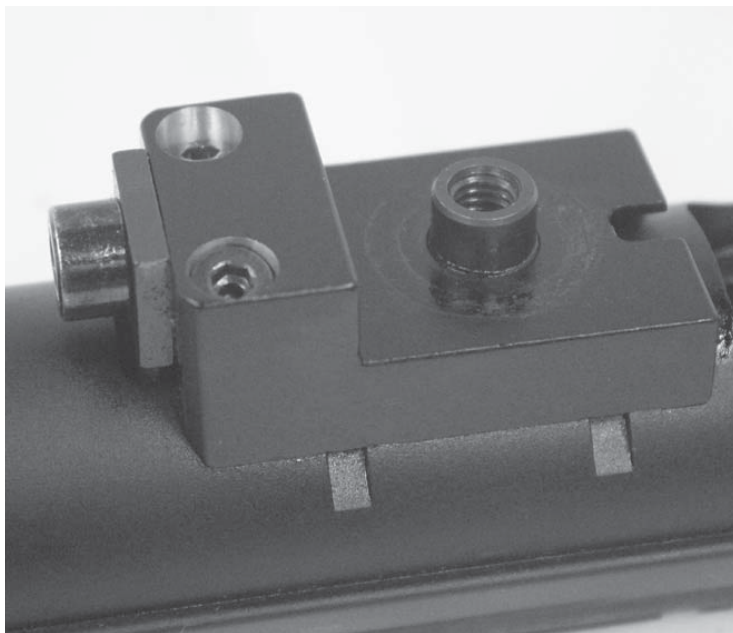
- 11.** While it is not recommended, the large, rounded, bipod leg latch located in the center of the bottom of the stock can be removed by first removing this accessory rail by means of these two Phillips head screws (picture 1), and then driving out this pin (picture 2). The latches and the V-shaped spring can then be removed by driving their pins straight down and out of the stock (picture 3).



- 12.** Removing this small set screw forward of the recoil lug assembly will allow the forward rail section to be removed. Leave it alone unless the barrel is going to be changed. The barrel is retained by a castle nut.



- 13.** The recoil lug assembly should be left intact and attached to the receiver.



- 14.** The buttstock can be removed by inserting a screwdriver into the gap at the stock toe and lifting.

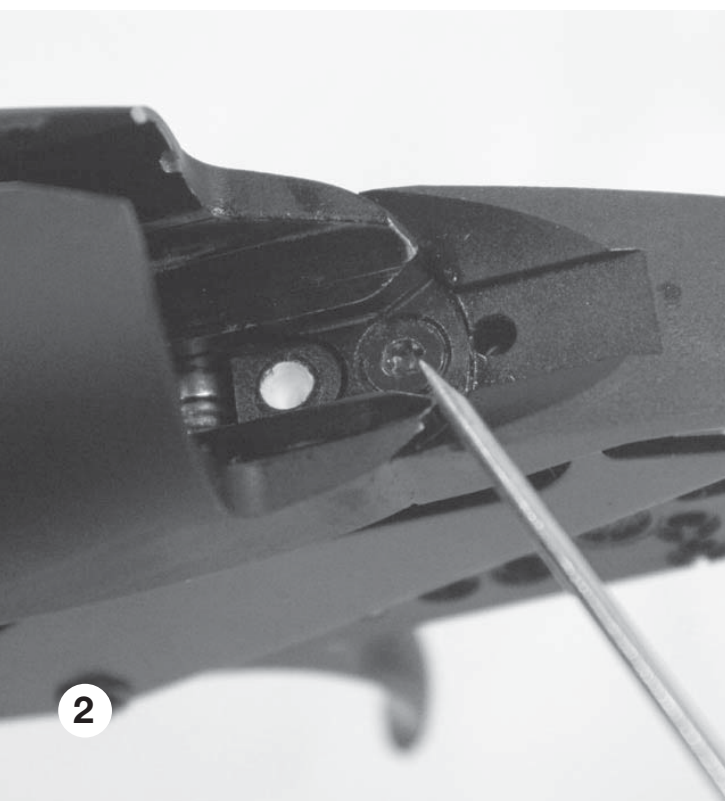
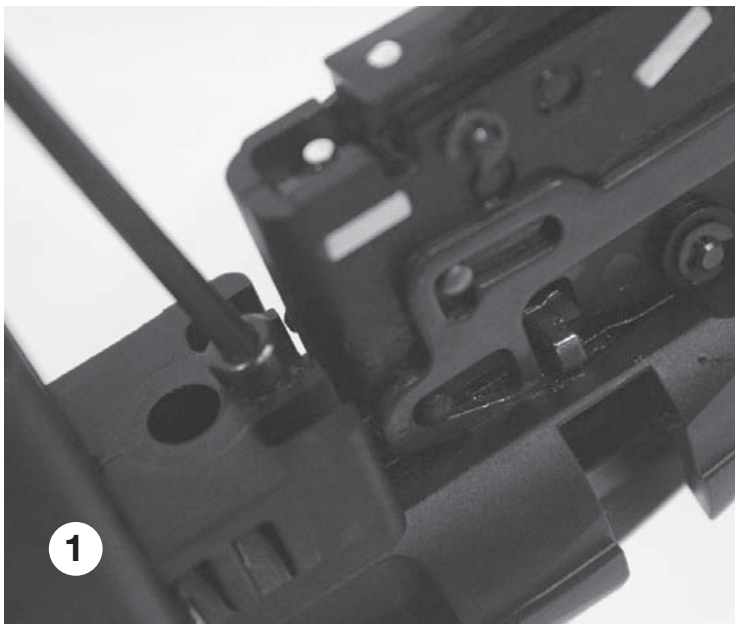


- 15.** Depressing the small button under the front sight will allow the front sight assembly to be pulled forward off the barrel.

- 16.** The folding front sight and spring can be removed, if necessary, by removing this small E-clip and then fully unscrewing the adjustment screw. Tapping out the pin just forward of it frees the latch and the latch spring.



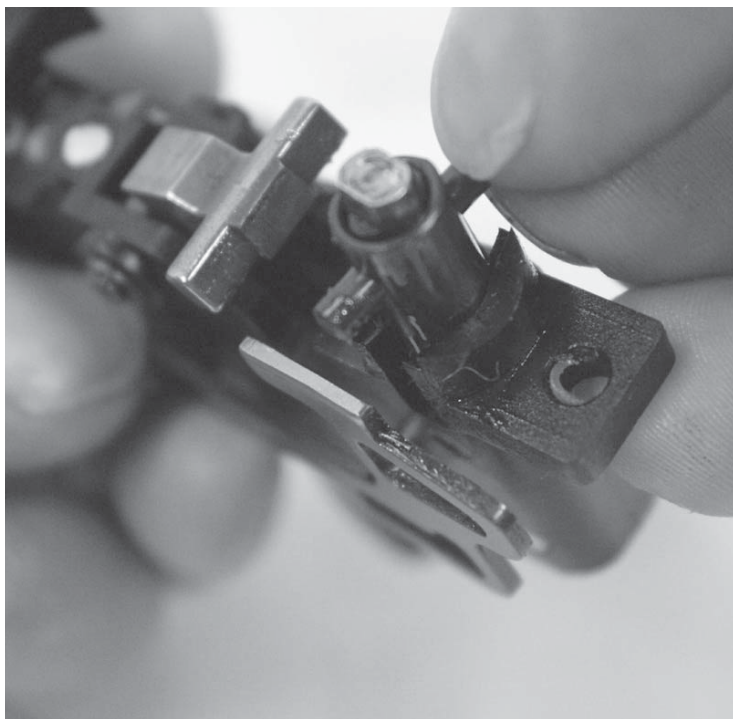
- 17.** Remove the hex head screw located between the trigger assembly and magazine well (picture 1). Remove this Torx head screw at the rear of the receiver (picture 2). This will fully free the trigger assembly for removal (picture 3).



- 18.** Pull the magazine well to the rear to remove it.



- 19.** Remove the bolt stop pin assembly by pushing the safety bar slightly to the right and then lifting the bolt stop out of the housing. The assembly can be separated by driving the pin out in either direction.



- 20.** Remove one of the two E-clips attached to the sear pin. Push the pin out in the opposite direction and remove the sear and its spring.

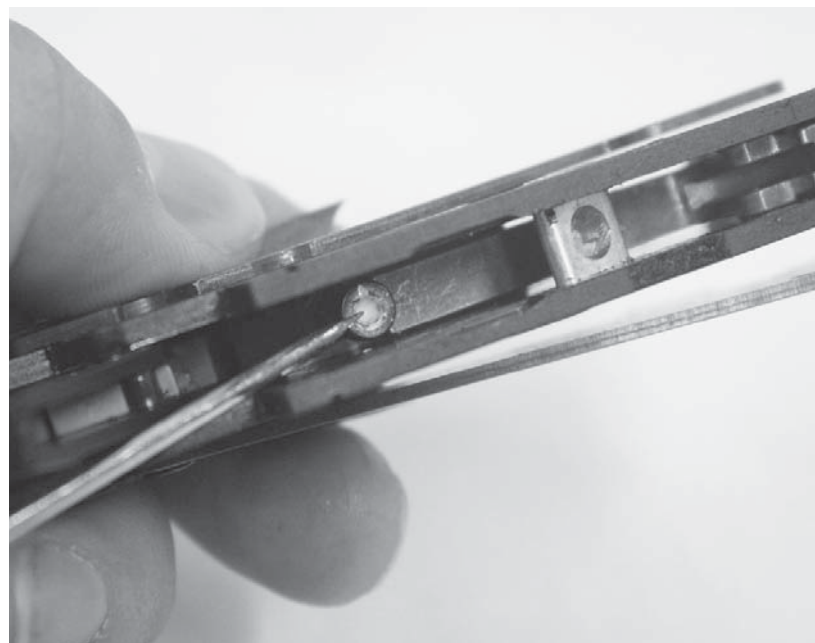
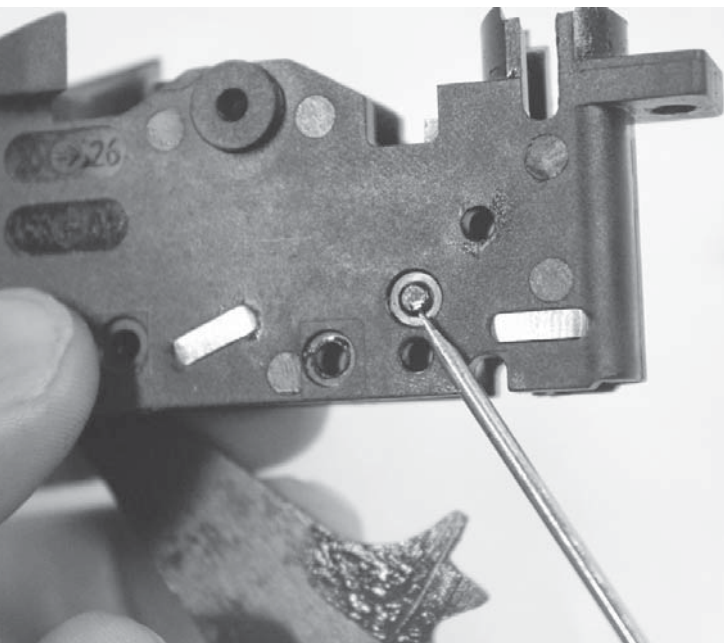
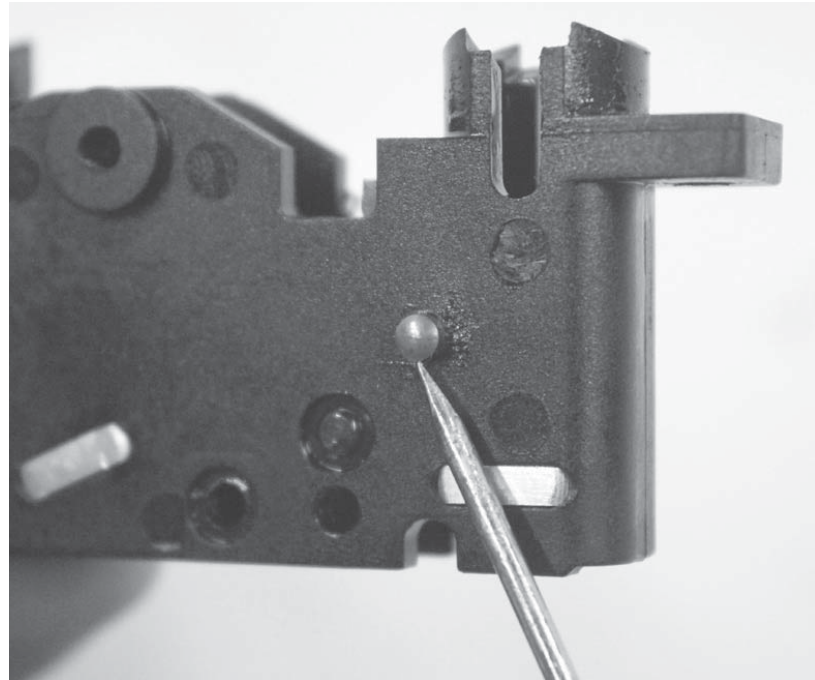


- 21.** Remove the E-clip located on the right end of this pin. Push out this pin, noting that the left end of it also holds onto the wide flat plate that activates the bolt stop and blocks the sear.

- 22.** Push out the trigger pin from right to left. Pull the trigger out by pulling it and then rolling it down out of the housing. The trigger itself has adjustments for first-stage travel (front screw) and pull weight (rear screw). Leave them in place unless the heads are stripped. Also note that the trigger has bushings on either side of the trigger pin hole.

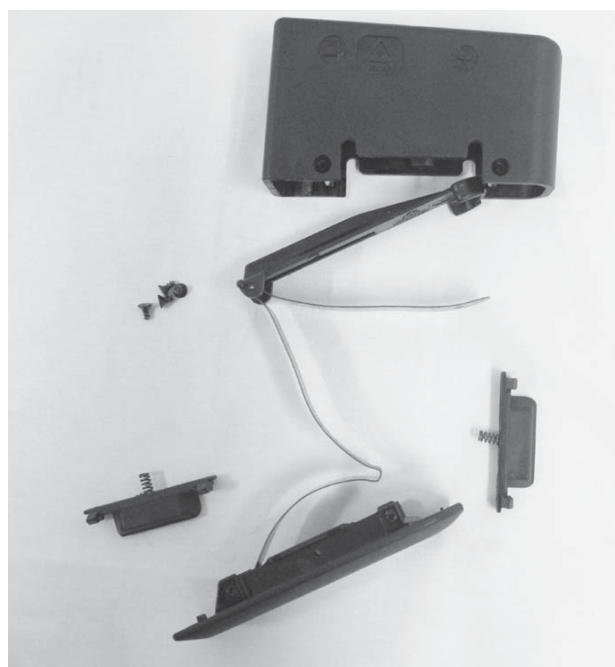
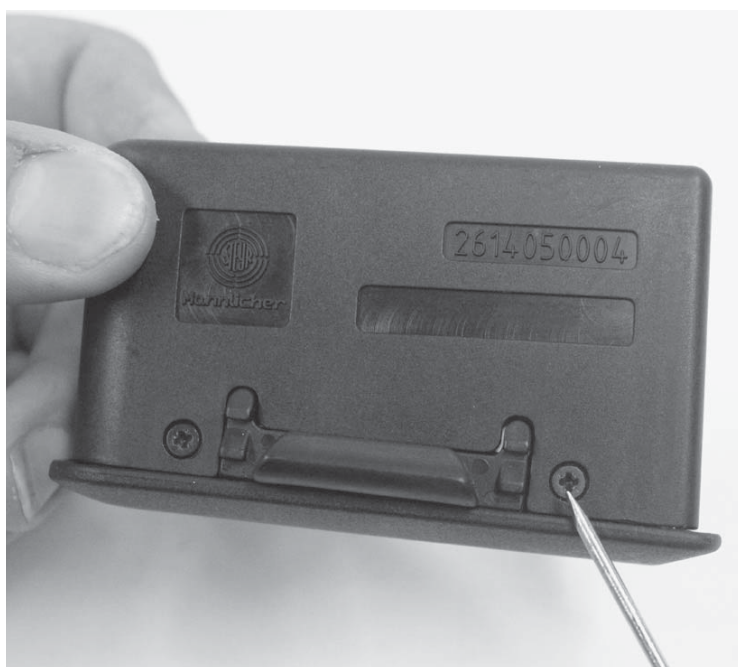


- 23.** Push out this stop pin.



- 24.** If necessary for repair, this pin can be pushed out from right to left to free the trigger bar (picture 1). However, the sear engagement screw (picture 2) must be removed in order to take out the trigger bar, as does the flat plate just forward of it that acts as a trigger spring base. The other flat plate at the very front of the housing contains the overtravel screw. Again, it is best to leave this plate and screw intact.

- 25.** The safety wheel, bolt stop plate, and safety arm are all retained by a riveted pin. It's best to leave these parts in place. If this pin is removed, the gray lock button and its spring in the wheel will be freed, and the wheel's pin can be pushed out and the wheel removed.



- 26.** The magazine can be readily disassembled by removing the four small Phillips head screws at the base of the body (picture 1). Take care to control all the parts here, as the two opposing buttons have their own springs, and the magazine spring itself is quite strong. Picture 2 shows the components after disassembly.

Reassembly Tips:

1. When reassembling the firing pin assembly, the cocking piece's lugs should be in the shallow depressions in the cam sleeve, not in the deep cam depressions.



2. There are two grooves in the firing pin. In this rifle, it is the rear groove that accepts the clip. Placing the E-clip in the foremost groove will weaken the firing pin strike and may cause ignition reliability issues.



3. When reinstalling the trigger into the housing, place the trigger spring into its hole in the trigger top, then insert the trigger so that the arm reaches over the trigger spring base plate. Then reach in with a small screwdriver and manipulate the spring back under and into the spring plate's hole.

Swedish Mauser Model 1894

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Swedish Mauser Model 1894 also apply to the following guns:

Brazilian Model 1894 Rifle

Mexican Model 1902 Rifle

Spanish Model 1893 Short Rifle

Spanish Model 1916 Artillery Carbine

Turkish Model 1893 Rifle

Chilean Model 1895 Rifle

Spanish Model 1893 Rifle

Spanish Model 1895 Carbine

Swedish Model 38 Rifle

Swedish Model 96 Rifle

Data: Swedish Mauser
Model 1894

Origin: Sweden

Manufacturers: Mauser (Germany) &
Swedish arsenals

Cartridges: 6.5x55mm

Magazine capacity: 5 rounds

Overall length: 37.6 inches (carbine)

Barrel length: 17.7 inches (carbine)

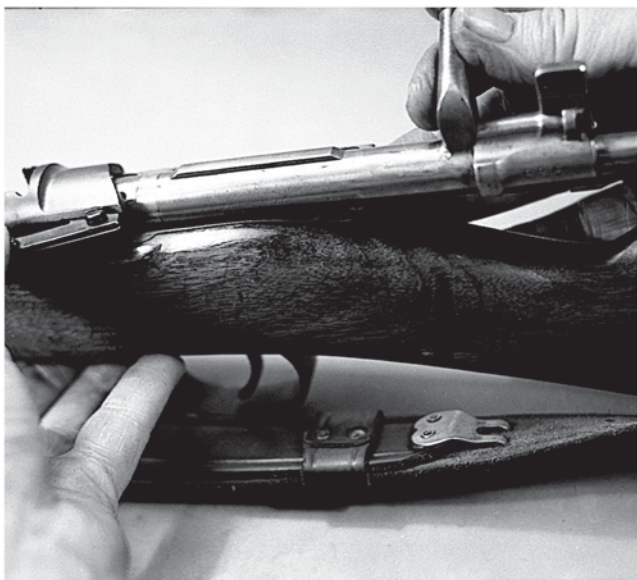
Weight: 7.6 pounds (carbine)

There are some small differences, but mechanically there is the same basic design in the Spanish Mauser of 1893 and 1895, and the Swedish Model 1894 and Model 1896. Both rifle and carbine versions were made. There is also the Model 38, a shortened conversion of the Model 1896 Swedish rifle. The Model 1894 Swedish carbine was chosen for our takedown sequence because its fore-stock arrangement is slightly more complex than the other guns, which used simple barrel bands.

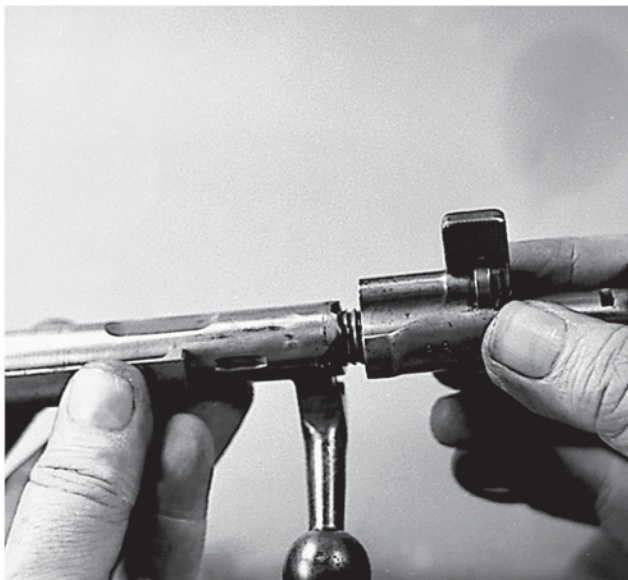


Disassembly:

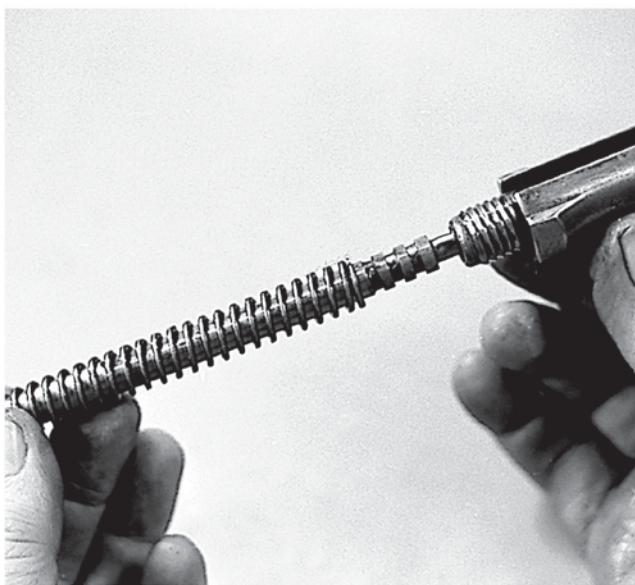
1. Open and close the bolt, cocking the striker. Set the safety in its vertical on-safe position. Open the bolt, pull the bolt stop outward, and remove the bolt toward the rear.



2. Unscrew the striker assembly (counter-clockwise, rear view), and remove the assembly toward the rear.

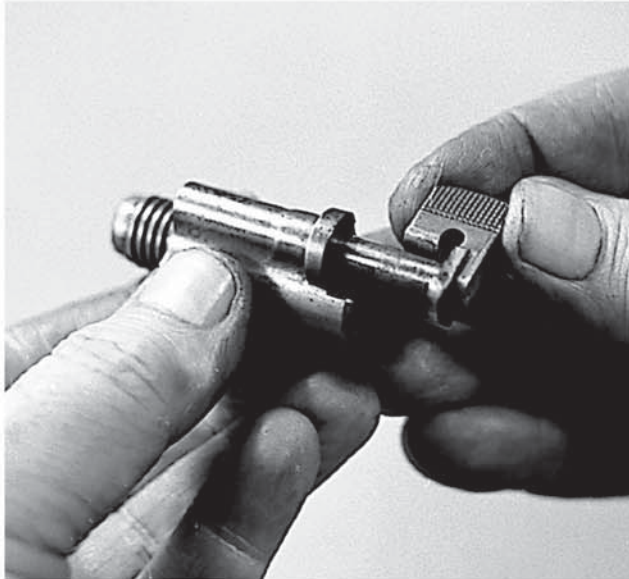


3. Rest the firing pin point on a block of wood, or grip the front shoulder in a padded vise. Using the safety-lever as a handle, push down the headpiece until the sear contact lug on the cocking piece clears. Turn the cocking piece 90 degrees in either direction, and slowly release the spring tension.



4. Remove the cocking piece and the bolt headpiece toward the rear. The spring is easily removed from the shaft of the striker.

- 5.** Turn the safety-lever all the way over to the right, and remove it toward the rear.



- 6.** Turn the extractor to the bottom of the bolt, and push it off toward the front. The collar that retains the extractor can be removed by spreading it out of its groove, but in normal takedown it is best left in place.



- 7.** Insert a tool in the opening at the rear of the magazine floorplate to depress the latch, and move the floorplate rearward.

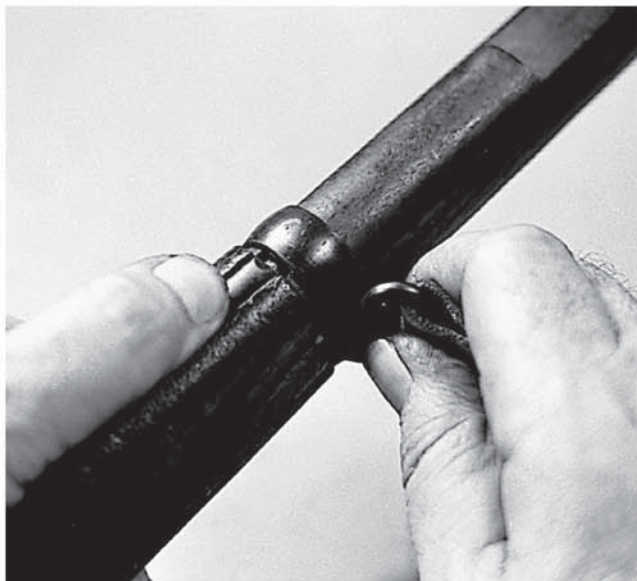
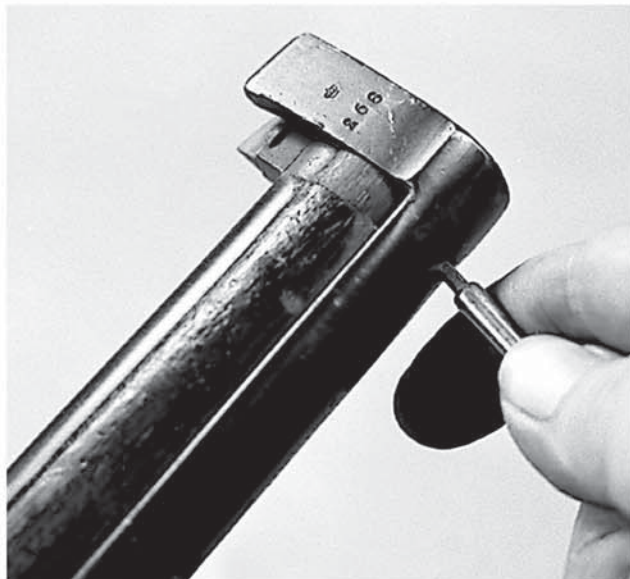


- 8.** Remove the magazine floorplate, spring, and follower. These parts are easily separated by sliding the spring out of its recesses in the floorplate and follower.

- 9.** Remove the screw from the underplate that extends rearward from the muzzle piece. The screw is located just forward of the bayonet lug, which has been removed from this gun.



- 10.** Through the access hole on the underside near the muzzle, depress the lock plunger and move the assembly off toward the front.



- 11.** Depress the locking bar on the underside behind the barrel band, and remove the barrel band toward the front.

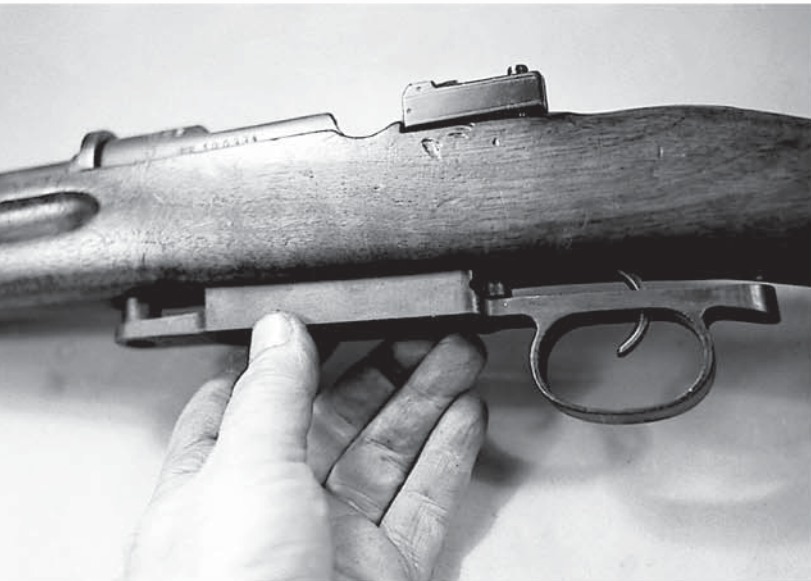


- 12.** Drift out the rear sight cross pin, and remove the rear sight. The rear sight spring is retained by a vertical screw.

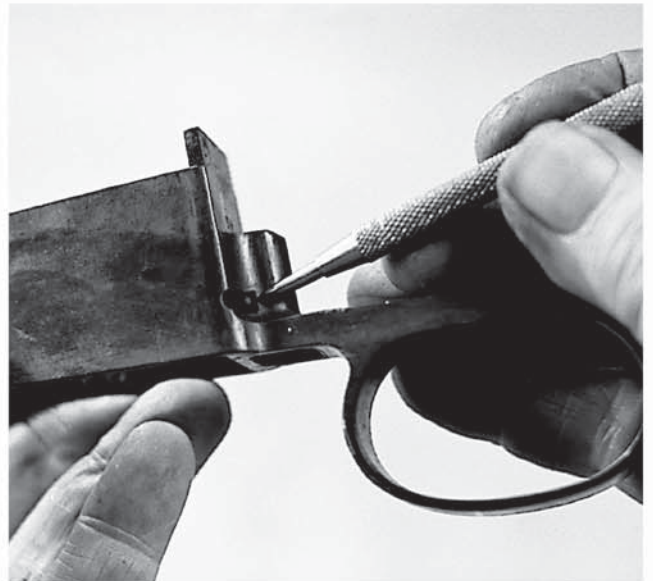
- 13.** Lift the upper handguard at the front, and move it forward for removal.



- 14.** Remove the vertical screws on the underside at the front and rear of the trigger guard/magazine housing unit.



- 15.** Remove the trigger guard/magazine unit downward.

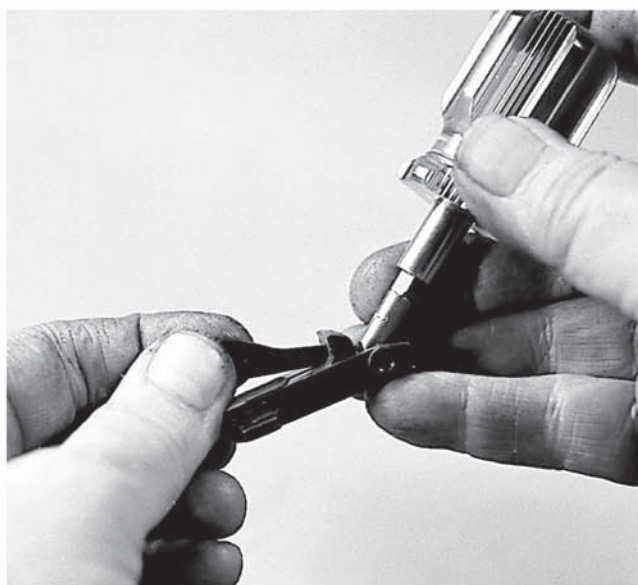


- 16.** The magazine floorplate latch plunger and its spring are retained in the unit by a cross pin.

- 17.** Remove the action from the stock.



- 18.** The bolt stop is pivoted and retained on the left side of the receiver by a vertical screw.

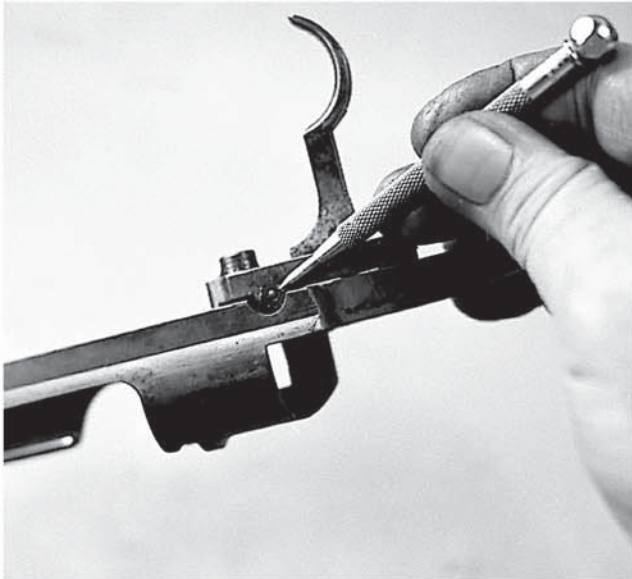


- 19.** The ejector can be removed from the bolt stop by moving it forward and lifting it out.



- 20.** If it is necessary to remove the combination bolt stop and ejector spring, you must grip the bolt stop in a padded vise and drive the spring forward for removal. In normal takedown, the spring is best left in place.

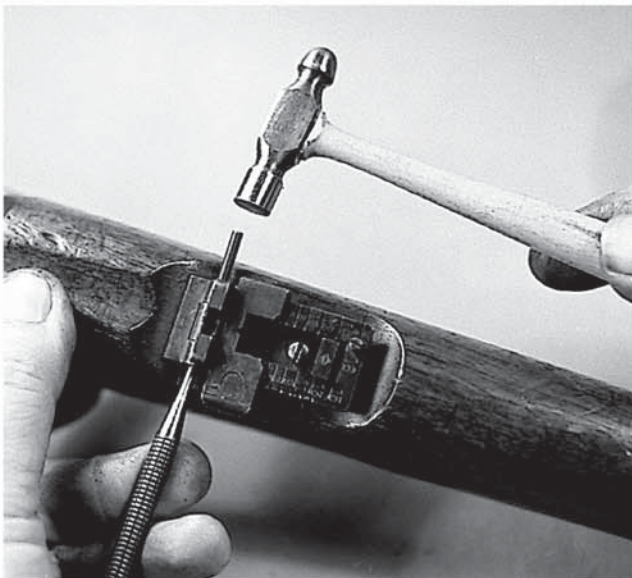
- 21.** Push out the cross pin that retains the trigger and sear assembly, and remove the assembly, and the spring, downward.



- 22.** The trigger can be separated from the sear by drifting out the cross pin. The spring is easily lifted out of its recess.



Reassembly Tips:



- 1.** Use a drift punch to position the rear sight for reinstallation of the cross pin.



- 2.** When replacing the muzzle unit, it will be necessary to insert a tool to depress the latch plunger as it is moved back into place. Be sure the stepped lip at the rear of the unit goes inside the barrel band.



Swiss Schmidt-Rubin Model 1911

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Swiss Schmidt-Rubin Model 1911 also apply to the following gun:

Swiss Schmidt-Rubin Model 1911 Carbine

Data: Swiss Schmidt-Rubin
Model 1911

Origin: Switzerland

Manufacturer: Swiss military arsenals

Cartridge: 7.5mm Swiss

Magazine Capacity: 6 rounds

Overall length: 51.65 inches

Barrel length: 30.75 inches

Weight: 10-1/8 pounds

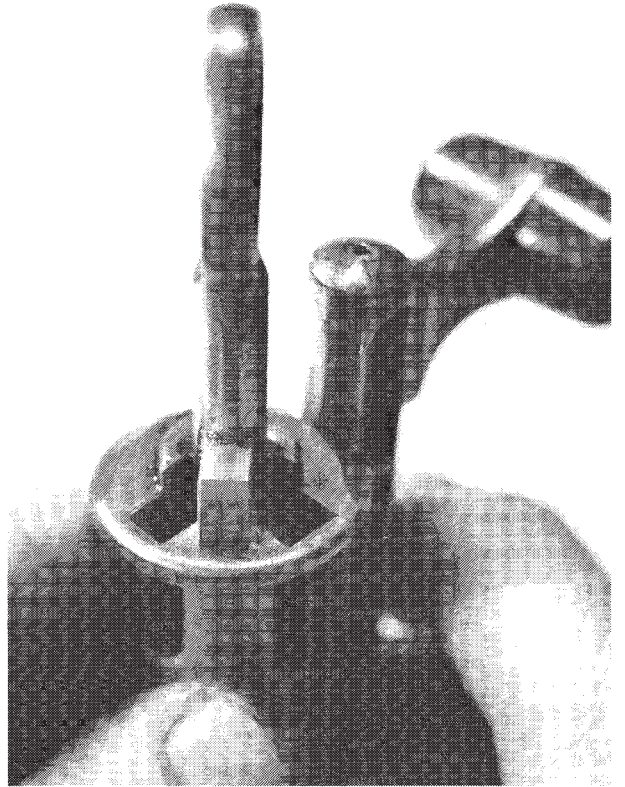
The Swiss rifle of 1889 was designed by Colonel Rudolf Schmidt, director of the Swiss Federal Arsenal, and its 7.5mm cartridge was designed by Colonel Eduard Rubin, director of the Swiss Federal Ammunition Factory. The design of this rifle was modified several times during its long period of manufacture (68 years!), and the version most familiar in the U.S. is probably the Model 1911, the one shown in the photos. Although not practical from a military standpoint, the straight-pull bolt mechanism of this rifle is a mechanical work of art. A carbine version was also produced, and these instructions will generally apply.

Disassembly:

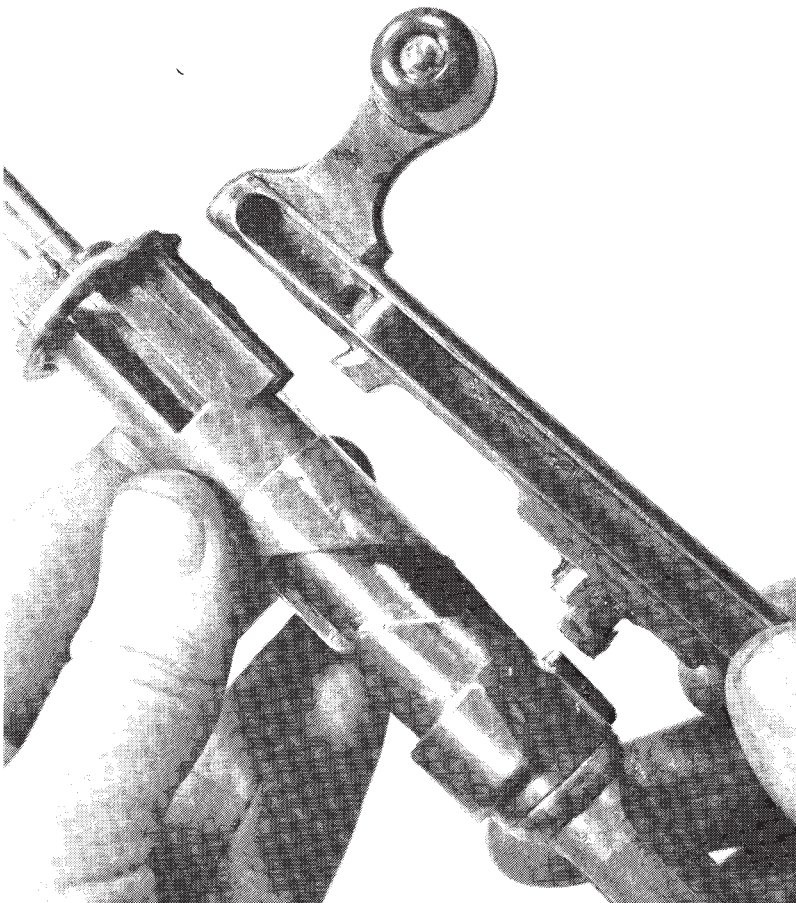
1. Remove the magazine. Depress the bolt stop, located on the right side of the receiver, hold it down, and remove the bolt assembly toward the rear.



2. Pull back the cocking piece ring and turn it, setting its underlug halfway between the two rectangular openings in the rear of the bolt end piece.

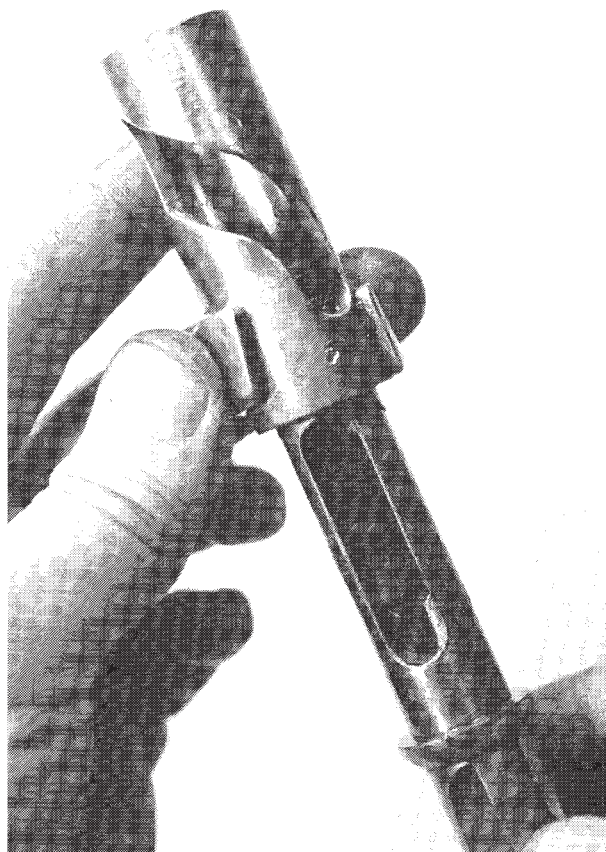
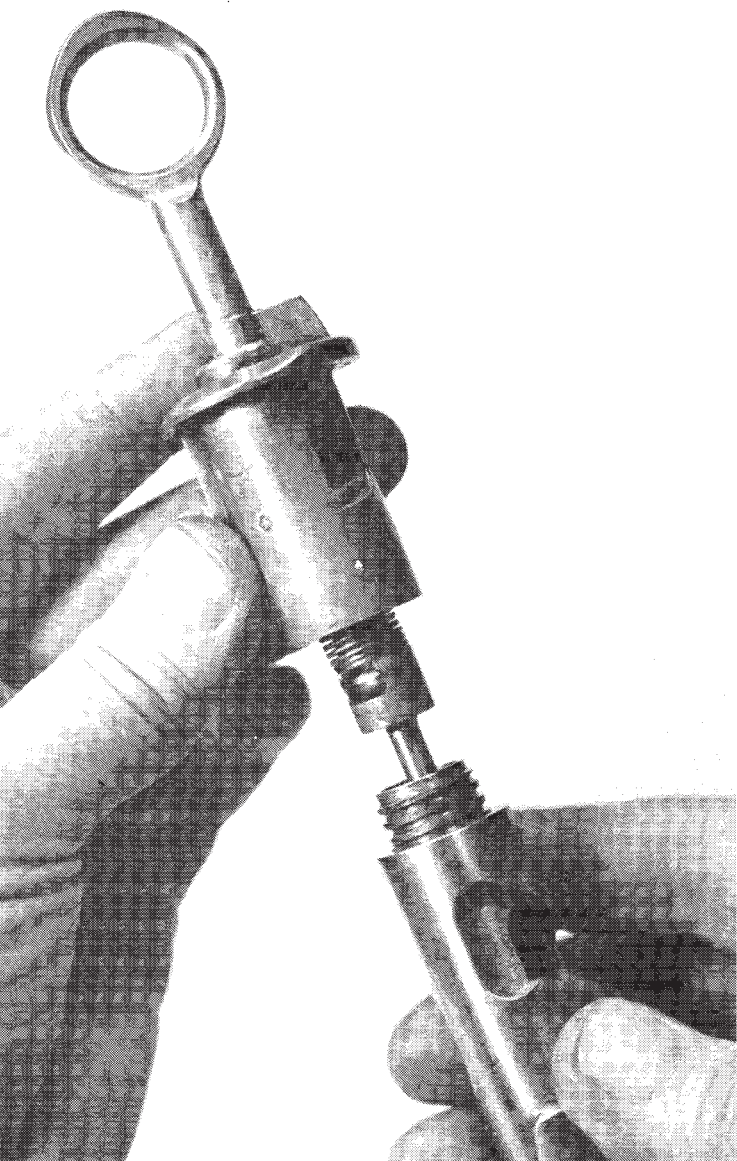


3. Turn the locking sleeve clockwise (rear view) until the cam rod and bolt handle unit can be moved forward and detached from the bolt, as shown.

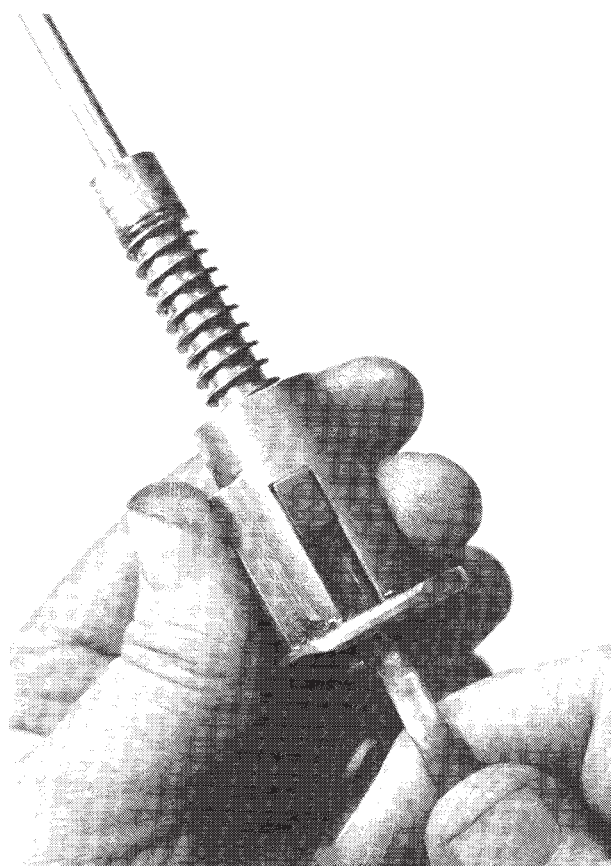


- 4.** Taking care not to move the striker lug from its position between the two openings, unscrew the bolt end piece and remove it toward the rear.

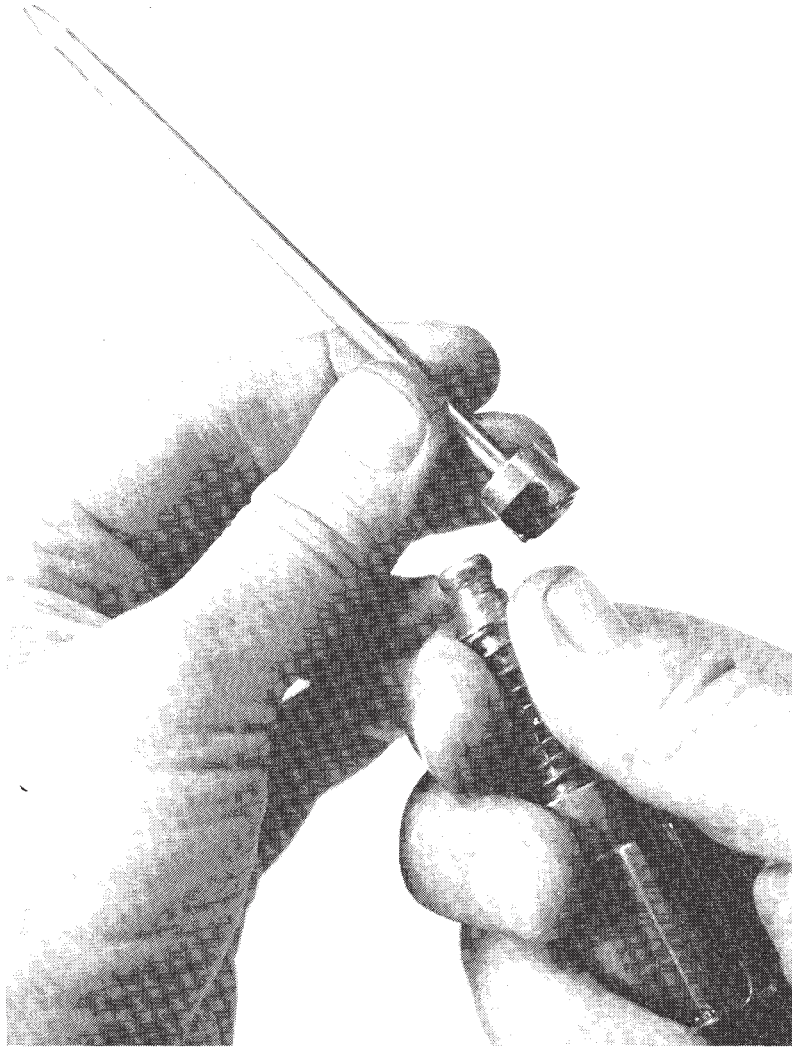
- 5.** Remove the locking sleeve toward the rear.



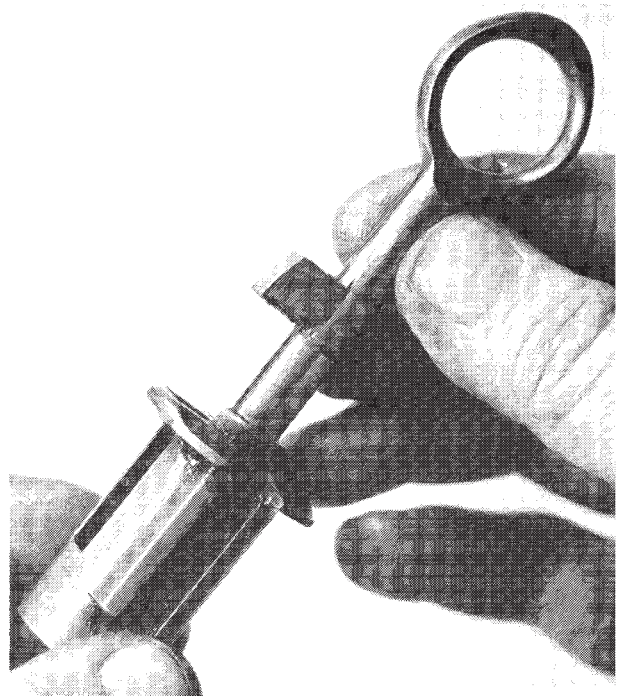
- 6.** With a firm grip on the bolt end piece, turn the cocking piece back until its underlug aligns with the lower opening, and allow the striker lug to move forward into its slot, partially relieving the tension of the striker spring.



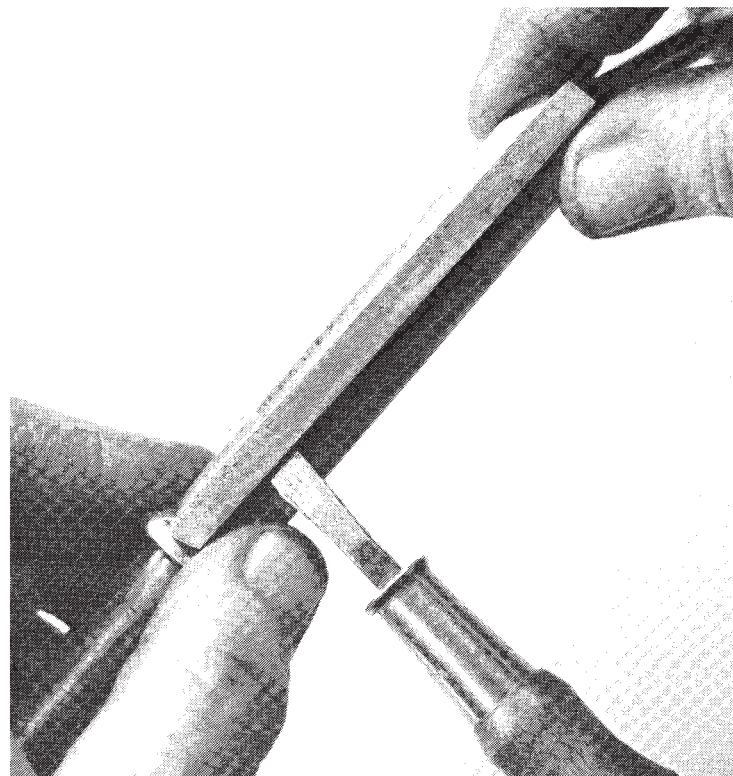
7. With a firm grip on the striker spring, pull it back away from the rear of the firing pin, and detach the firing pin from the end of the striker rod toward the side. Remove the striker spring toward the front.



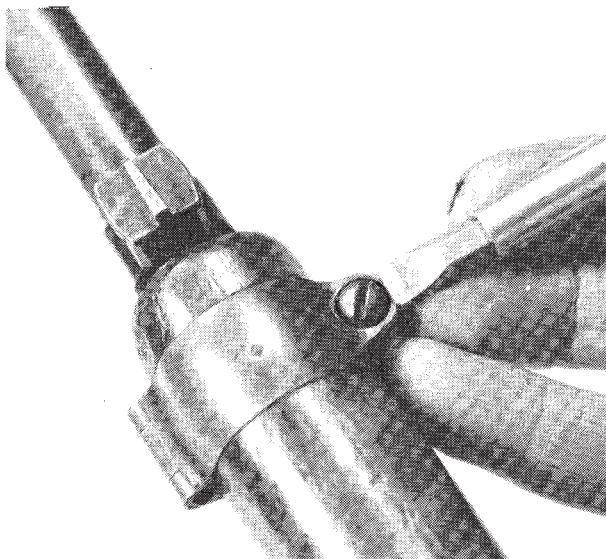
8. Remove the cocking piece from the rear of the bolt end piece.



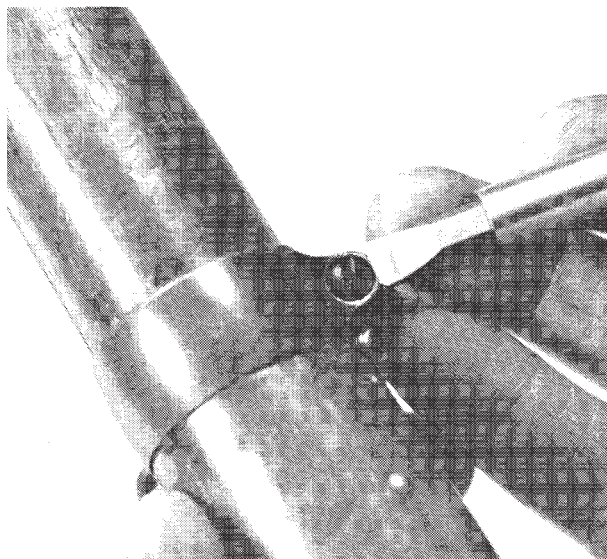
9. Wedge a screwdriver under the extractor in the opening provided at the rear, raising it just enough to lift its underlug out of its slot in the bolt. Push up the extractor beak at the front, just enough to clear the edge of the bolt, and rotate the extractor clockwise (top view) until it can be lifted off. **Caution:** Be sure to raise each end only enough for clearance. Unless removal is necessary for repair, leave the extractor in place.



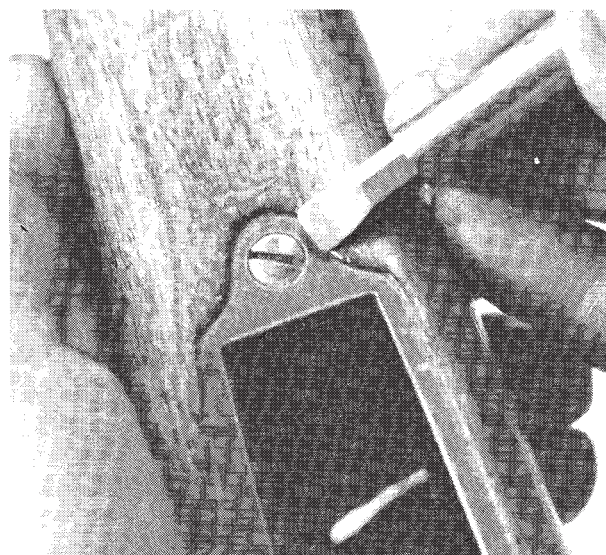
- 10.** Remove the vertical screw on the right side of the front barrel band. Open the hinged band, and take it off.



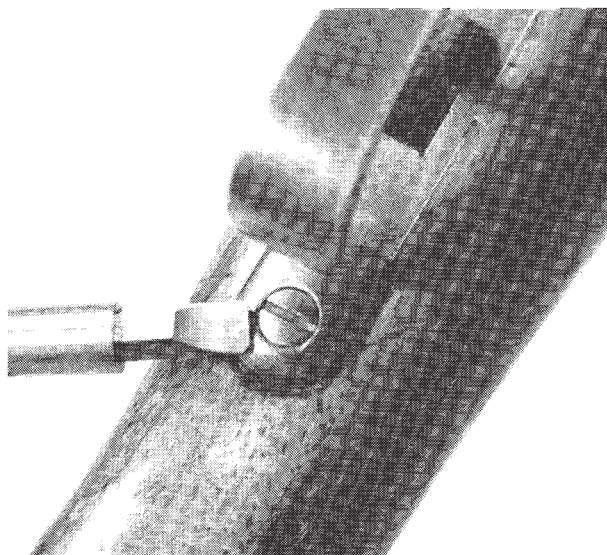
- 11.** Take out the vertical screw on the right side of the rear barrel band, depress the spring latch on the underside of the stock, and slide the band off toward the front. The upper handguard wood can now be removed from the top of the barrel.



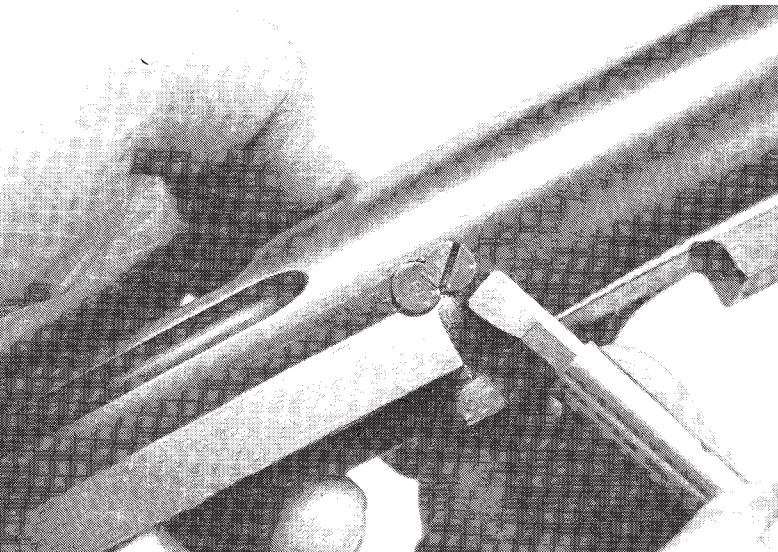
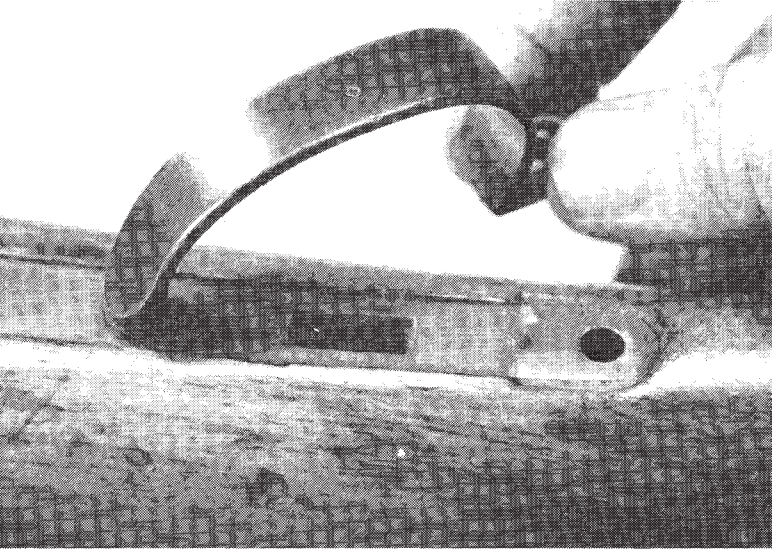
- 12.** Remove the vertical screw at the front of the magazine opening. Remove the vertical screw at the rear of the magazine opening.



- 13.** Remove the vertical screw at the rear of the trigger guard, and separate the action from the stock.



- 14.** The trigger guard and magazine plate can be removed at this point, but these are usually very tightly fitted, so take care not to chip the recess in the wood. The trigger guard can be removed by unscrewing it from the plate.

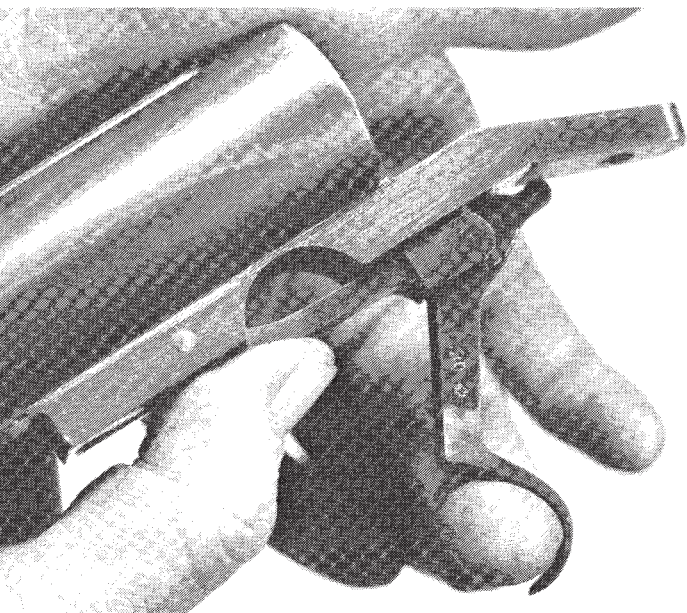


- 16.** Remove the ejector lock screw, and take out the ejector toward the left. If it is tight, it can be nudged with a drift punch from inside the receiver.

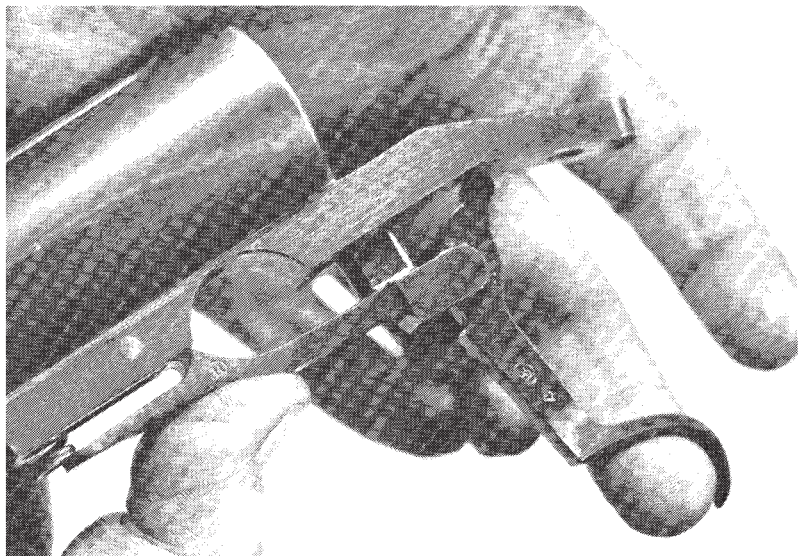
- 15.** To remove the bolt stop and its spring, drive the pivot pin inward. There is a recess for it on the underside of the receiver, and the pin is not removed, just driven out of the way. The bolt stop and its spring are removed downward.



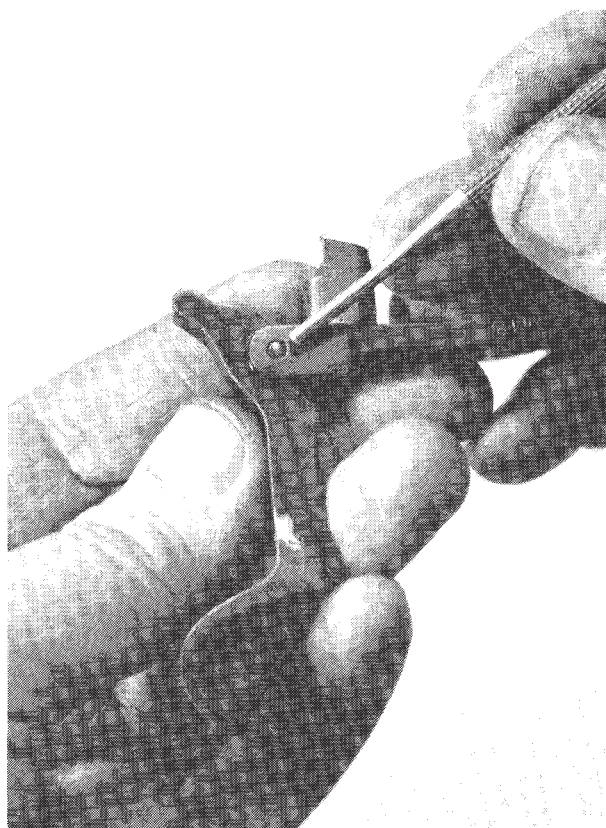
- 17.** To remove the trigger and sear assembly, push the front arm of the sear inward (upward) and toward the rear until it stops, then pull the trigger, and the assembly will be detached from the receiver.



- 18.** Remove the trigger and sear assembly from the bottom of the receiver, and remove the sear spring from its recess. The sear pivot pin is not removed from the receiver.

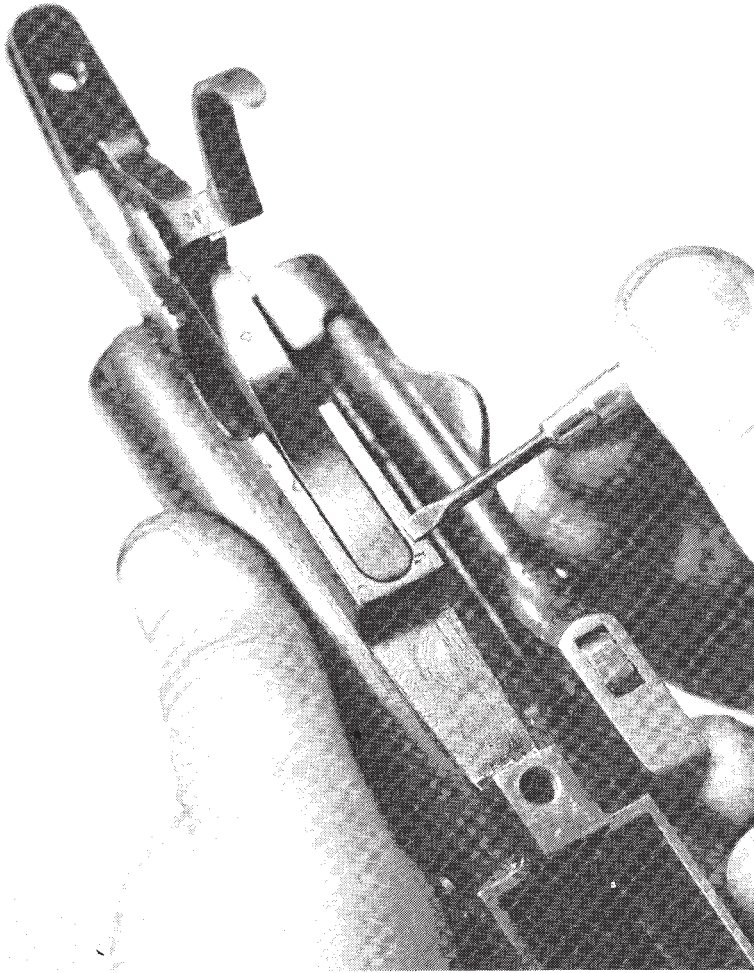


- 19.** The trigger and sear can be separated by drifting out the trigger cross pin.

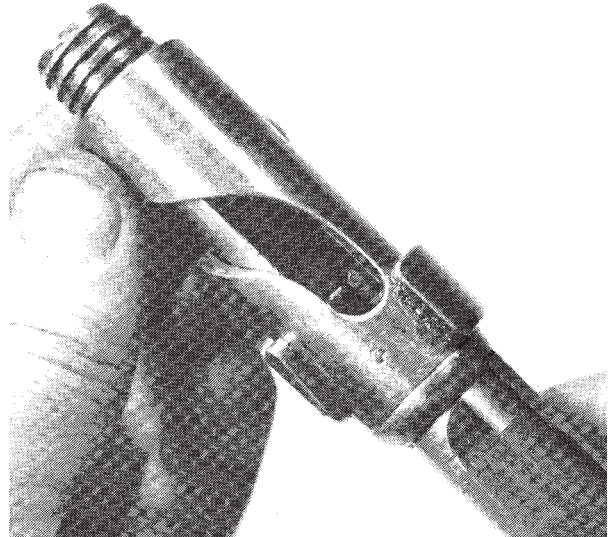


Reassembly Tips:

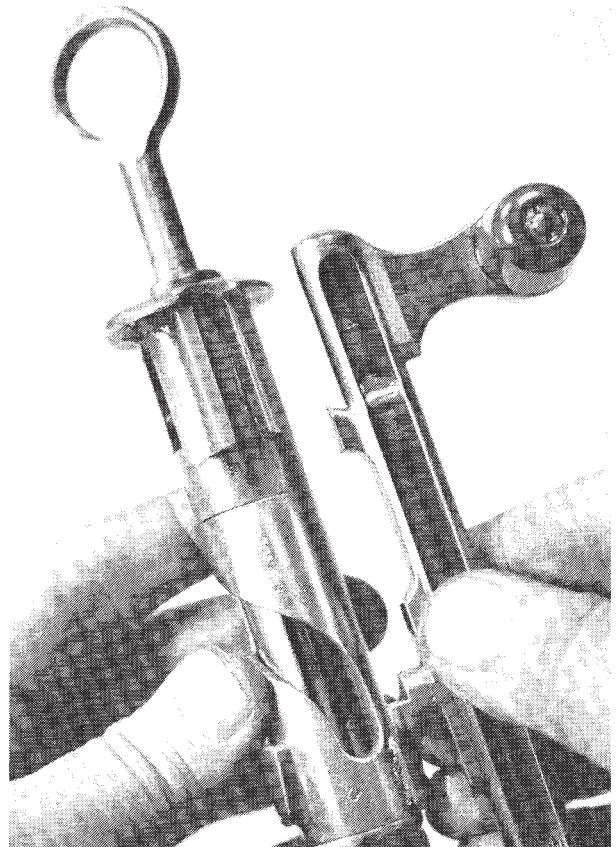
1. When replacing the trigger and sear assembly, set the front tip of the sear on the sear spring, and push the assembly inward and toward the front. Be sure it snaps audibly into place, and is all the way to the front of its recess, as shown.



2. When replacing the locking sleeve on the bolt, note the locking lugs must be at the front.



3. For replacement of the cam rod and bolt handle unit, the bolt sleeve and end piece must be in the position shown.





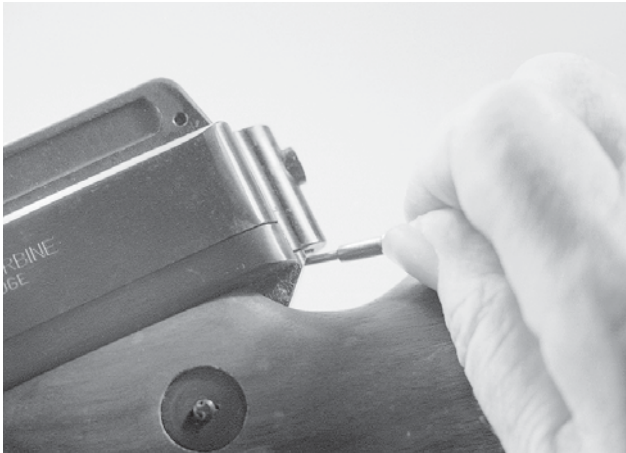
Thompson Model 1927A1

Data:	Thompson Model 1927A1
Origin:	United States
Manufacturer:	Auto-Ordnance Corporation, Worcester, Massachusetts
Cartridge:	45 Auto
Magazine capacity:	20 or 30 rounds
Overall length:	40 inches
Barrel length:	16-1/2 inches
Weight:	13 pounds

For many years, Auto-Ordnance was a division of Numrich Gun Parts Corporation. Recently, Kahr Arms purchased Auto-Ordnance, and the semi-auto versions of the Thompson are now made at their factory in Worcester, Massachusetts. In addition to the gun shown here, there is also a military type, with the cocking handle on the side. With that difference in mind, these instructions will still apply.

Disassembly:

1. Remove the magazine, and pull the trigger to drop the striker to fired position. Use a non-marring tool to depress the takedown latch button upward.



2. Keeping the button depressed move the lower receiver (the grip frame and buttstock) rearward until it stops. Pull the trigger, and move the unit a little farther. The takedown button meeting the sear will stop it.



3. Insert a small tool to again depress the takedown button upward, and remove the lower receiver unit toward the rear.



4. If removal is necessary, the takedown button and its spring can be pulled out of the upper receiver. If not, it can be left in place.



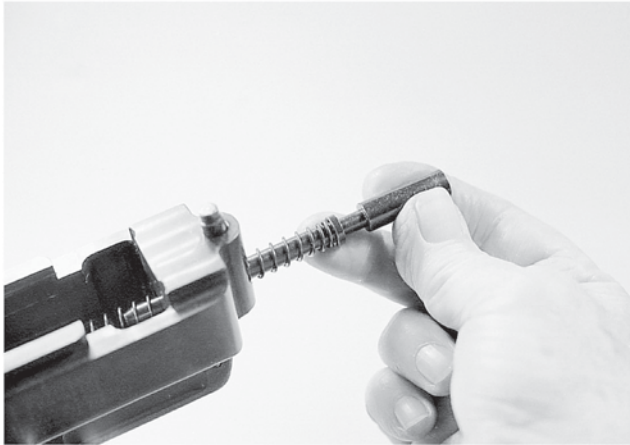
5. Insert a slim tool to nudge the base of the recoil spring guide forward and slightly outward, until it can be grasped for removal. **CAUTION:** Keep the guide and springs under control.



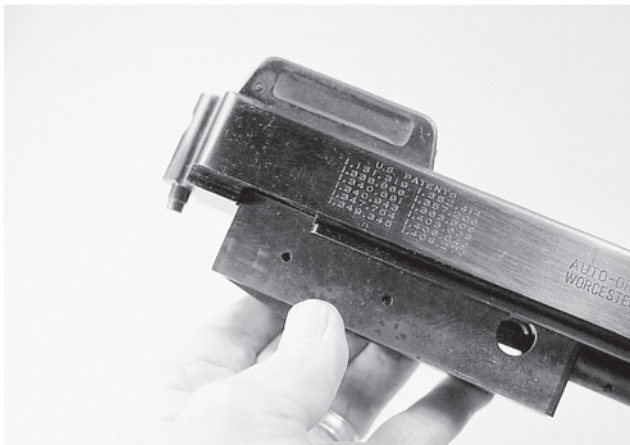
6. Grasp the recoil spring unit firmly, and lift it at the rear for removal. **CAUTION:** Control the tension of the twin springs.



- 7.** Removal of the recoil spring unit will free the striker spring and its guide to be taken out toward the rear.



- 9.** Move the bolt all the way to the rear, and take it out downward.



- 11.** Lift the extractor at the front just enough for clearance, and slide it out toward the front. If removal is not necessary for repair, it is best left in place.



- 8.** Move the bolt assembly toward the rear until the bolt handle is aligned with its exit opening in tire top of the receiver, and take out the handle upward. If there is slight resistance, moving the striker rearward in the bolt will free it.



- 10.** Remove the striker plunger toward the rear. Drifting out the two crosspins in the bolt will allow removal of the striker. Note that the pins are flanged on one side, so be sure to determine the direction before drifting them out.



- 12.** The small crosspin in the round forward portion of the bolt is a bearing pin for the striker, and it retains no part. It can be left in place.



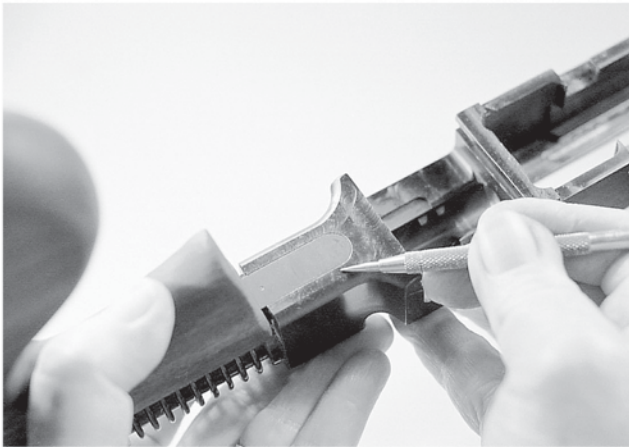
- 13.** The ejector retaining plate is spring-tempered, and there is a small stud at the rear that locks it. To take it off, insert a tool under the plate at the rear to lift the stud, and simply unscrew it. Some damage to the finish will likely occur, so except for repair, leave it in place.



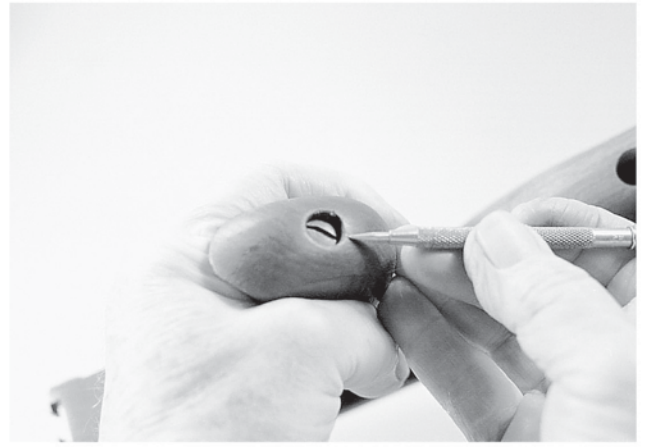
- 14.** The front sight has a lengthwise dovetail mount, and can be drifted out rearward. The compensator is not routinely removed. Four vertical screws retain the rear sight.



- 15.** The front handgrip is retained by a single through-bolt. The mounting bar is a press fit in the receiver, and it is not routinely removed.



- 16.** The pistol grip and the buttstock can be taken off by removing their respective screws. However, they do not have to be removed for disassembly of the lower receiver.



- 17.** Set the safety lever in mid-position, and use a non-marring tool to move the spring away from its shaft. Remove the safety toward the left.



- 18.** Push the pivot posts and their plate toward the right, exerting alternate and equal forces. Move the unit only slightly at first.



- 19.** A non-marring tool, such as this brass drift, can be used to gently pry the plate outward. Remember to do it equally at each end, and avoid stressing the safety spring. As the unit is moved, keep in mind that parts will be released, so control them at the top.



- 20.** The first part to be freed will be the disconnecter.



- 21.** Restrain the other parts, and remove the plate and pivot posts toward the right.



- 22.** Remove the bolt hold-open actuator.



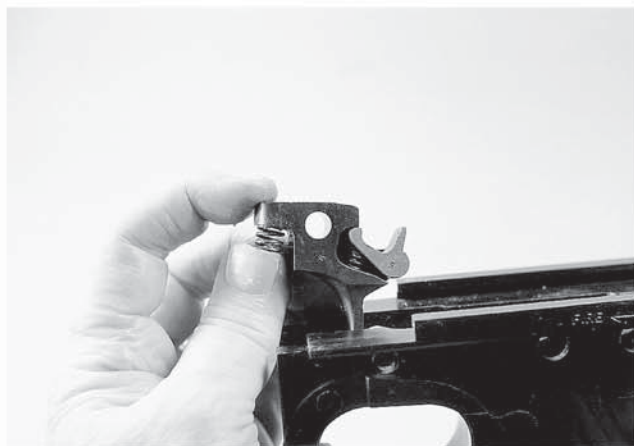
- 23.** Remove the hold-open and its spring.



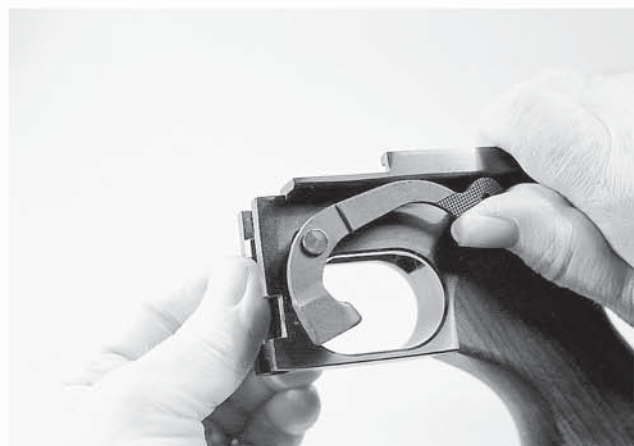
- 24.** Remove the sear and its spring.



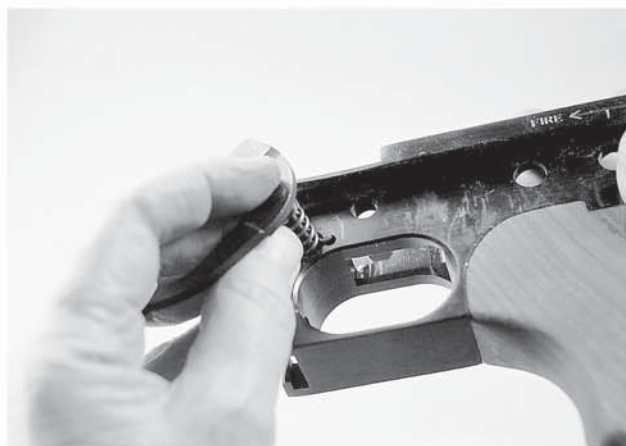
25. Remove the trigger assembly.



26. The sear trip and its spring are mounted in the trigger by a cross pin that is riveted on the right side. This system is removed only for repair purposes.



27. Turn the magazine catch upward until its catch lug is clear of the hole in the guard, and push it out toward the left.



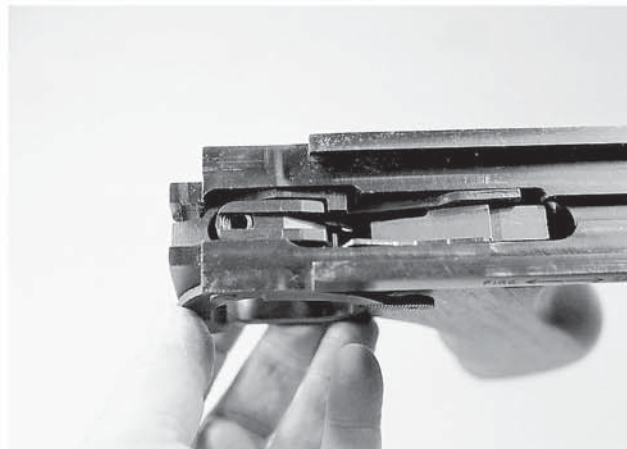
28. When the catch lug has cleared the guard, allow the lever to rotate, easing the spring tension for removal.

Reassembly Tips:

1. When installing the magazine catch, be sure the outer tip of the spring is in its hole on the inner face of the part. Insert the inner tip of the spring in its channel, as shown, then rotate the unit to restore the spring tension before pushing it into place.



2. When installing the firing system parts, put the trigger in first, then the actuator and hold-open. Be sure the lower end of the hold-open spring engages its recess inside. The sear and disconnecter go in last. The parts are shown here in proper order.



3. As the recoil spring unit is re-installed, depress the striker guide at the rear to mate it with the slot in the guide base.



Thompson/ Center Venture

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the Venture also apply to the following guns:

Thompson/Center Icon

Data: T/C Venture

Origin: United States

Manufacturer: Thompson/Center Arms, Springfield, MA

Cartridge: various, from .223 Rem to .338 Win. Mag.

Magazine Capacity: 3 rounds

Overall Length: 43.5 inches

Barrel Length: 24 inches

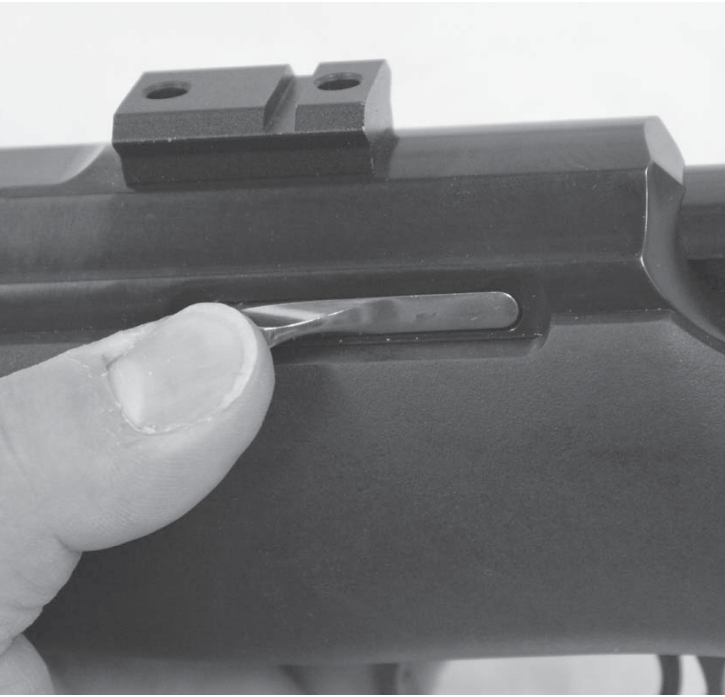
Height: 5.2 inches

Weight: 7 pounds

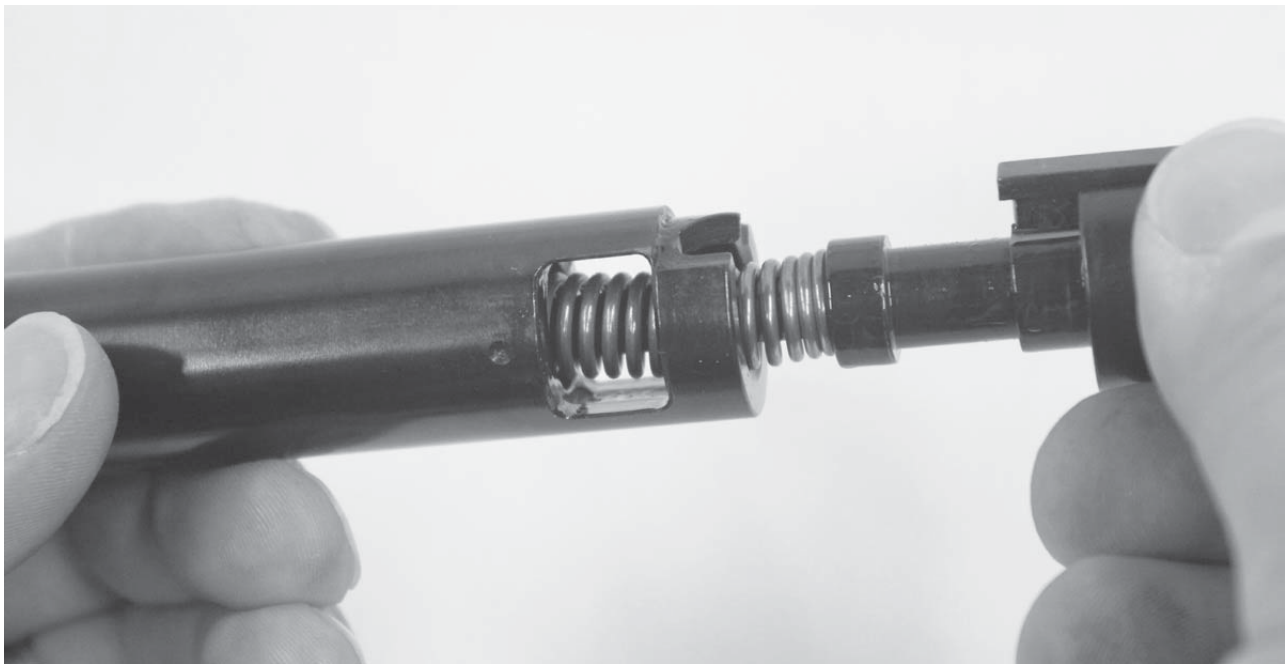
The T/C Venture is the price point rifle in Thompson/Center Arms' bolt-action rifle lineup. The similar Icon rifle has a higher grade appearance, including a wooden stock. The Dimension rifle also adds caliber exchangeability and stock fitting options, but otherwise, the Icon and Dimension are fundamentally based on the Venture. The rifles are pillar bedded and have a 60-degree bolt rotation. Synthetic stocked models also feature rubber inlays to enhance gripping power. They are available in all the usual hunting rifle chamberings.

Disassembly:

1. Remove the bolt by opening it, pushing the bolt stop button and pulling the bolt assembly out to the rear of the receiver.

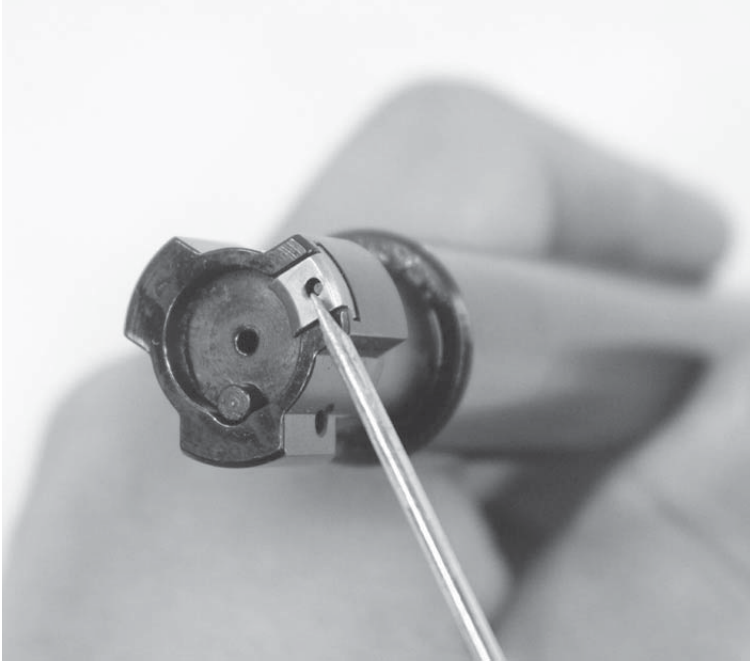


2. The bolt handle splits and “forks” over the firing pin assembly. The bolt components should be in the “open” orientation, as if just removed from the receiver. The bolt handle must be pushed out to the right. When the handle is withdrawn, the shroud will snap back, as the handle will no longer retain it. Control this piece, as the tension is quite high.



3. Pull the firing pin assembly from the rear of the bolt body. The firing pin can be unscrewed from the cocking piece/shroud. There is likely thread retaining compound in the threads, and heat may be required to disassemble the firing pin assembly. Contain all the parts, as the firing pin spring is still compressed.

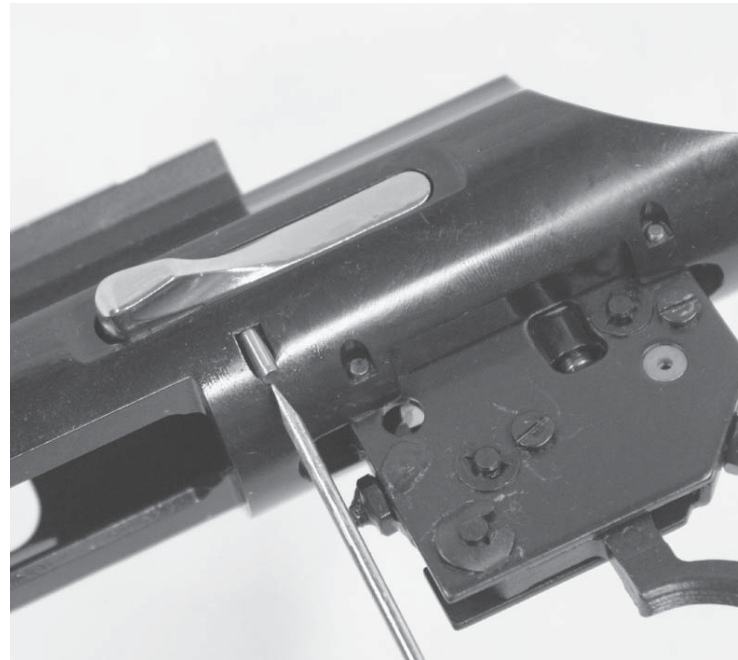
- 4.** Drive out this pin to remove the ejector and spring.



- 5.** The extractor can be removed by depressing the extractor spring plunger through this small hole, then sliding the extractor toward the outside of the bolt.

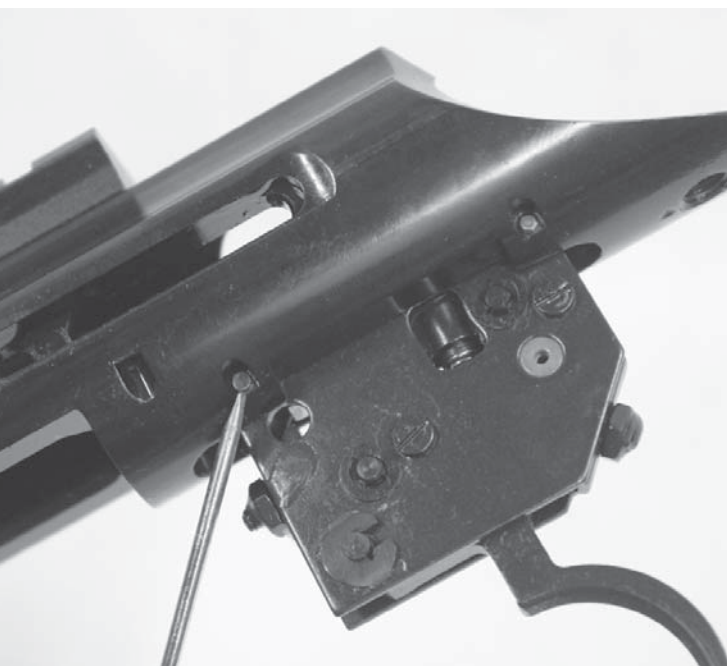


- 6.** Remove the front and rear action screws just in front of the magazine well and just behind the triggerguard.

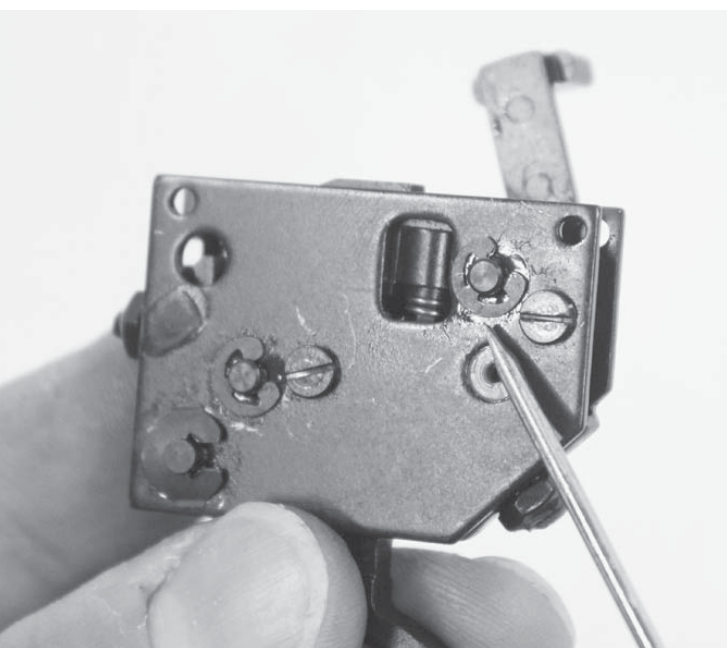


- 7.** The bolt stop pin protrudes from a blind hole. Slightly depress the bolt stop and pull the pin from the receiver. The bolt stop and spring will follow.

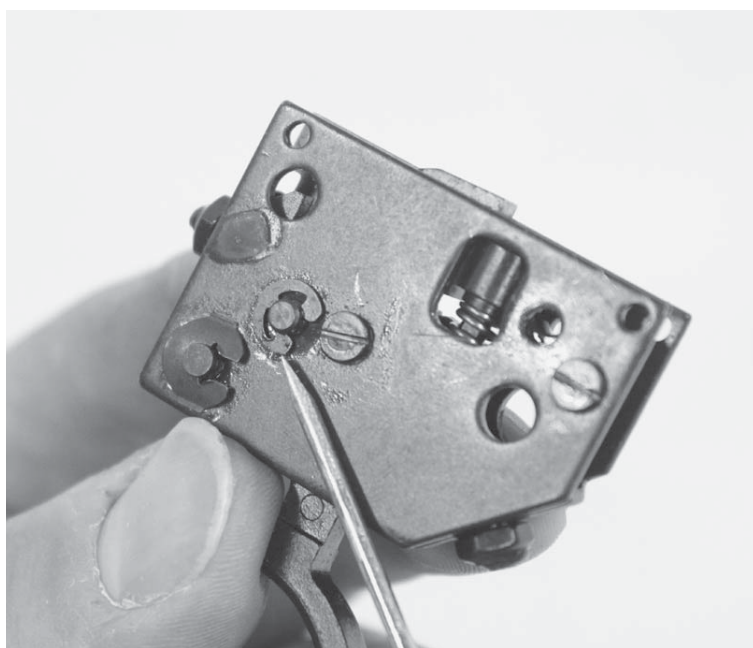
- 8.** The trigger housing is held onto the receiver by two pins, one at the front of the housing and one at the rear. Push both pins out to free the trigger housing.



- 9.** The overtravel screw on the front of the housing and the sear engagement screw on the lower right of the housing need not be removed unless they need to be replaced.

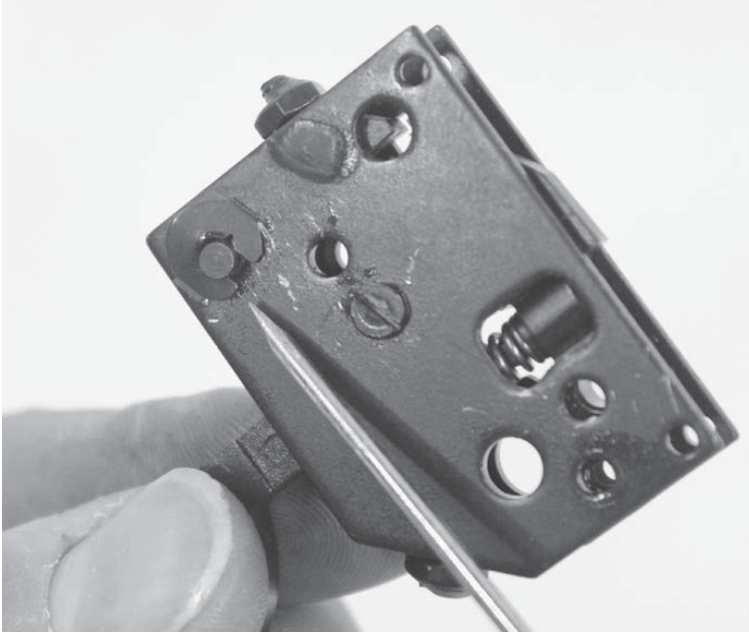


- 10.** Removing this E-clip and pushing this pin out will free the sear. The right side of the pin extends into the safety lever. The safety detent, spring, and housing can also be removed to the right.

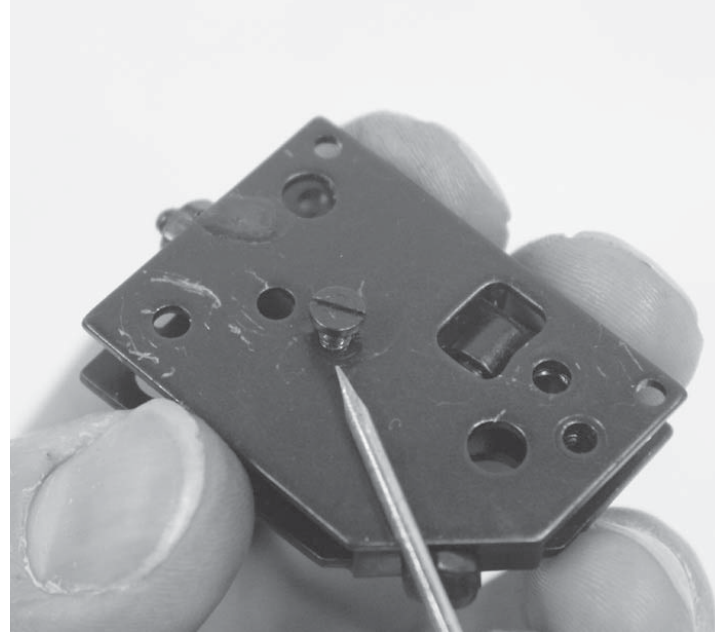


- 11.** Removing this E-clip will free the safety bar. Remove it to the right.

- 12.** Removing this E-clip will free the trigger pin. The trigger is removed to the bottom. The trigger/sear spring will follow.



- 13.** The two screws in the housing hold the assembly together. Removing them will separate the two halves and free the sear.



- 14.** The magazine floorplate can be removed by pushing the four small tabs into the magazine body and pulling the floorplate from the magazine body. However, this is likely to damage the components and is not recommended as a routine procedure. The latch can be removed by driving out the small pin at the top front of the magazine.

Reassembly Tip:



- 1.** It is easier to replace the extractor if it is inserted into its slot from the center of the bolt face and pushed outward until the detent engages the hole in the extractor.



Tikka M695

Similar/Identical Pattern Guns:

The same basic assembly/disassembly steps for the Tikka M695 also apply to the following guns:

Tikka 595

Tikka 658

Tikka 558

Tikka T3

Data: Tikka 695

Origin: Finland

Manufacturer: Sako Ltd.

Cartridge: .270 Win.

Magazine Capacity: 3 rounds

Overall Length: 42.75 inches

Barrel Length: 22 inches

Weight: 7.25 pounds

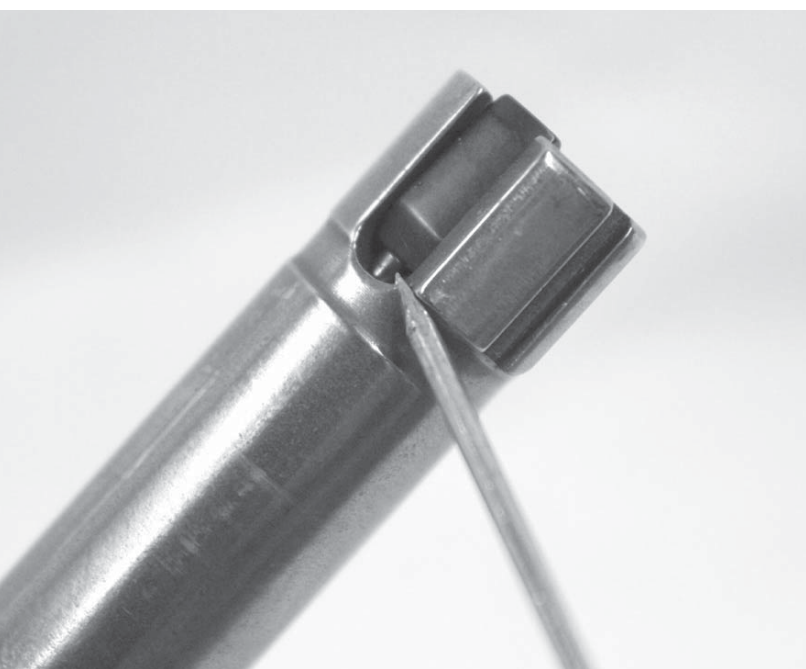
Tikka makes a fine line of rifles with synthetic to high-grade wood stocks, high-polished blue to matte stainless finish. Newer models tend to feature very good triggers, adjustable length of pull buttpads, and a very smooth operating bolt. This particular rifle is one of the Tikka Master series. The T3 line in current production is virtually identical externally, though they have received engineering changes to be less expensive to produce. Despite this, the disassembly is very similar. They are chambered in a variety of common hunting cartridges.

Disassembly Steps:

1. Open the bolt, depress the bolt stop button, and pull the bolt from the rear of the receiver.



2. The ejector and its spring can be removed by driving out this pin.

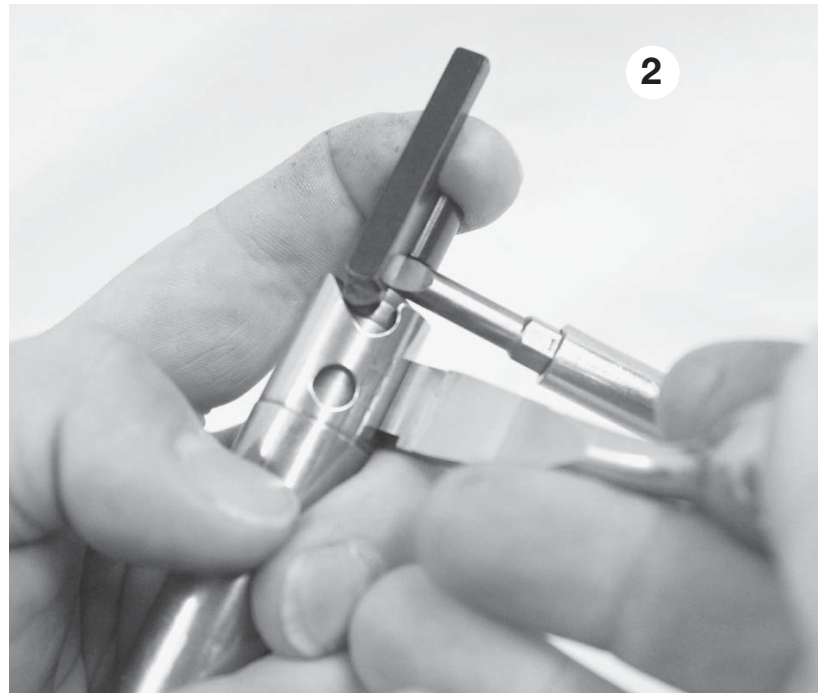


3. Depress the extractor detent back into the bolt to allow the extractor to clear the bolt.

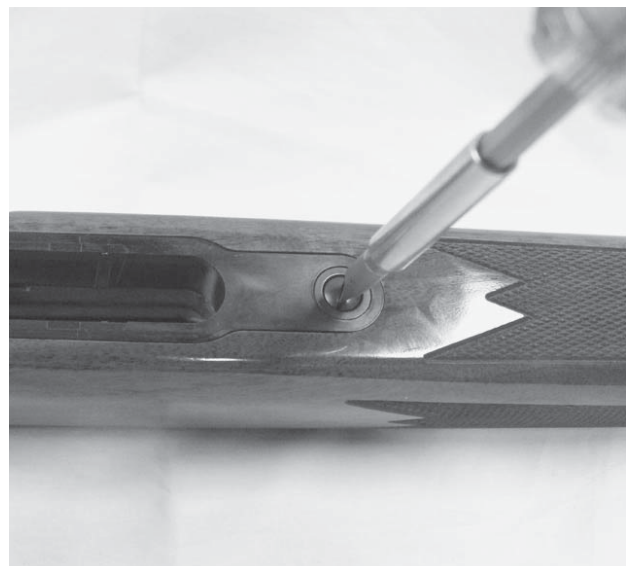


4. With the bolt cocked (as it was removed from the receiver), turn the shroud clockwise until the shroud can be pulled from the back of the bolt.

- 5.** Insert a screwdriver blade in between the cocking piece and the tabbed cylinder just in front of it (picture 1). Using the screwdriver, turn the cocking piece to its uncocked position and push it slightly forward. This will allow the bolt handle to be pulled from the bolt assembly (picture 2).



- 6.** The firing pin assembly should not be disassembled unless it needs repair. There is a small ring spring underneath the firing pin spring stop. Once this spring is removed, the keeper, the firing pin spring, and the tabbed cylinder can be removed from the firing pin. If necessary, the firing pin and cocking piece can be unthreaded.

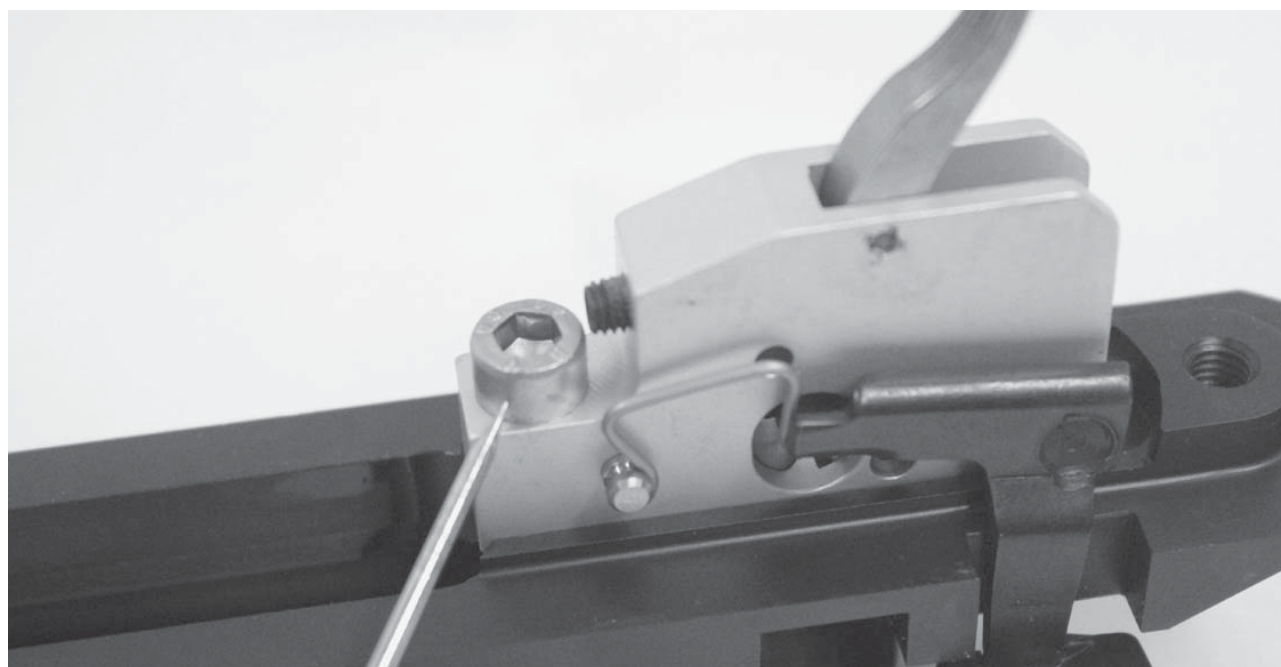
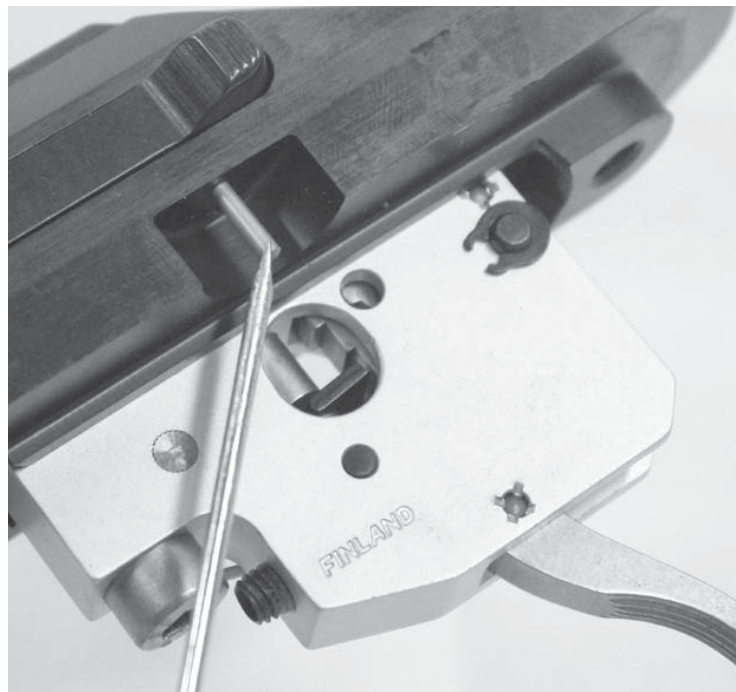


- 7.** Unscrew the two action bolts to remove the receiver from the stock. The trigger guard assembly will also be freed by removing these bolts. There are also bushings under the bolt heads. Note, also, that the large, L-shaped recoil lug will also fall free as the action is removed from the stock.

- 8.** The magazine catch and its spring can be removed by pushing out this pin.

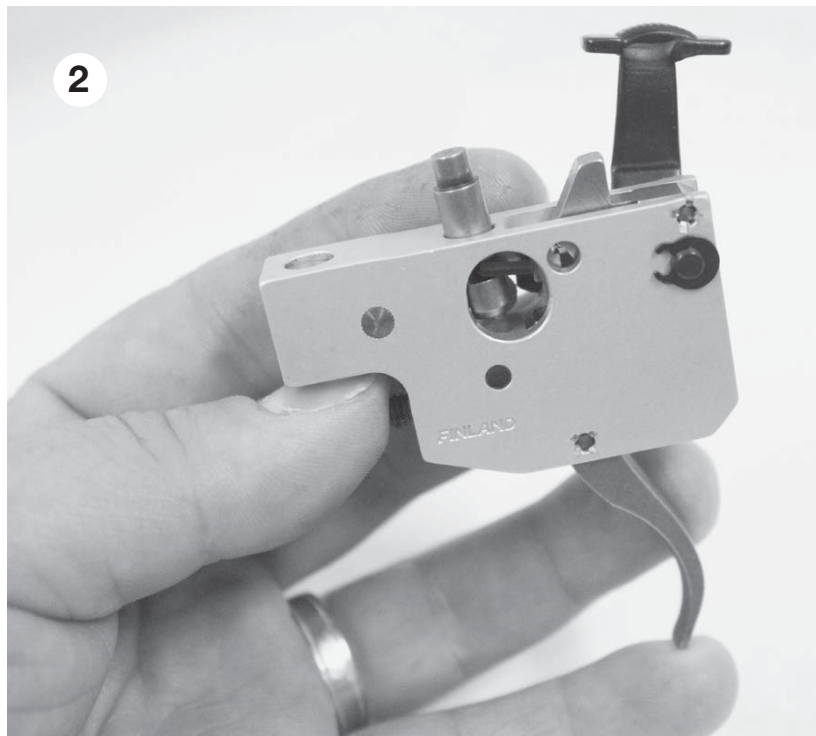
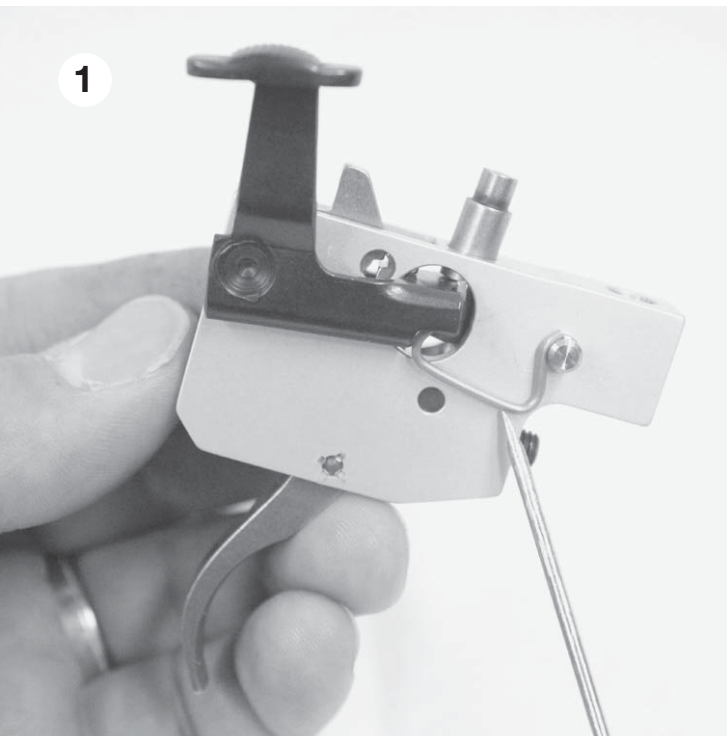


- 9.** Pulling out this pin will allow the bolt stop and spring to be removed.



- 10.** Unscrew this bolt to remove the trigger assembly.

- 11.** For the most part, the trigger assembly should not be disassembled, however the safety spring can be easily displaced and removed (picture 1). The trigger and sear pins, and the safety spring pin are all heavily staked or splined in place on the left side of the housing. The safety arm pin is retained by an E-clip and can be removed easily. Once the safety is gone, the large, vertical, bolt lock pin can be pulled from the top (picture 2). The sear pin and trigger pin can then be removed and the sear and trigger pulled from the back of the housing. The adjustment screws are merely screwed in place and can be adjusted or removed as needed.





U.S. Model 1894 Krag-Jorgensen

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the U.S. Model 1894 Krag-Jorgensen also apply to the following guns:

U.S. Model 1892 Krag-Jorgensen

U.S. Model 1895 Krag-Jorgensen

U.S. Model 1896 Krag-Jorgensen

U.S. Model 1898 Krag-Jorgensen

U.S. Model 1898 Krag-Jorgensen Carbine

Norwegian Krag Rifle

Data: Krag-Jorgensen

Origin: United States

Manufacturer: Springfield Arsenal

Cartridge: 30-40 Krag

Magazine capacity: 5 rounds

Overall length: 49.1 inches (rifle)

41.2 (carbine)

Barrel length: 30 inches (rifle)

22 inches (carbine)

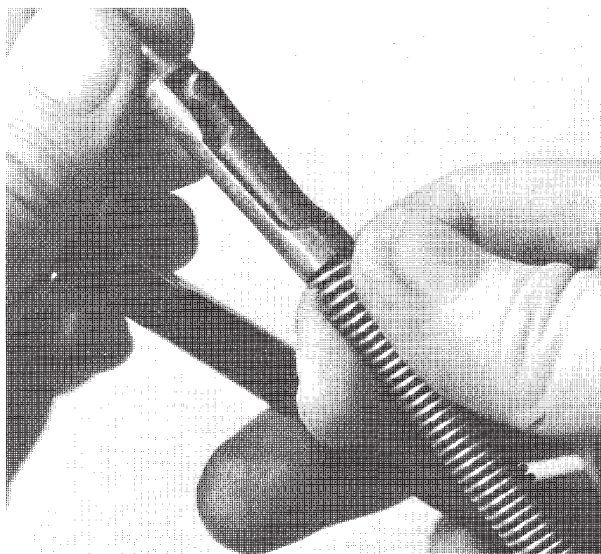
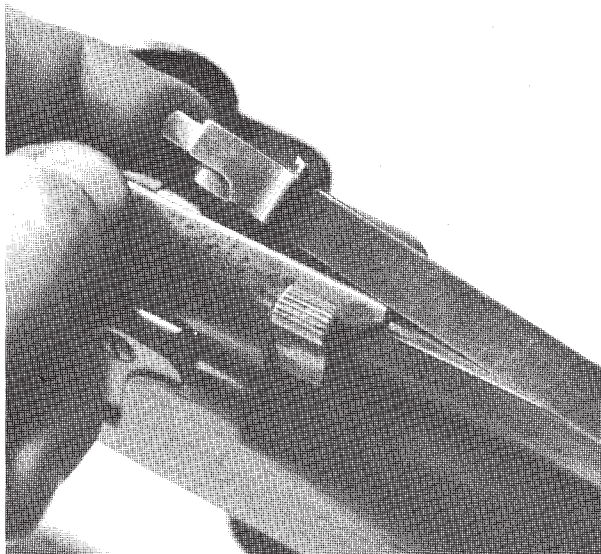
Weight: 9.3 pounds (rifle)

7-3/4 pounds (carbine)

Designed by Ole Hermann Johannes Krag and Erik Jorgensen at Konigsberg Arsenal in Norway, the Krag rifle was the U.S. military standard from 1892 to 1903. The Krag was the first U.S. military rifle to use a cartridge loaded with smokeless powder, and saw action in the Spanish-American War, the Phillippine Insurrection, and the Boxer Rebellion in China. Two points of the design are particularly notable—its unique magazine system, and the ultra-smoothness of its well-supported bolt. The Norwegian version has a difference in the magazine gate, but this should cause no difficulty in takedown.

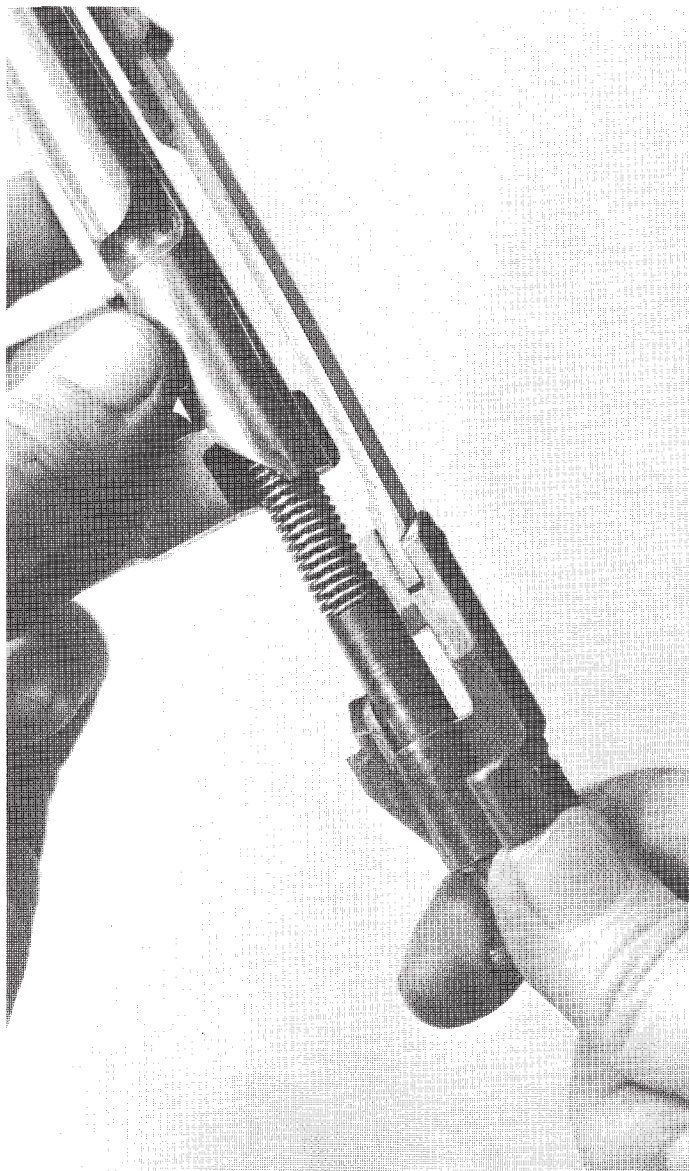
Disassembly:

1. To remove the bolt, open it and move it all the way to the rear. While lifting the front of the extractor, turn the bolt handle over toward the left, beyond its usual bolt-open position. The extractor will climb out of the open track in the upper rear of the receiver, and the bolt can then be withdrawn toward the rear

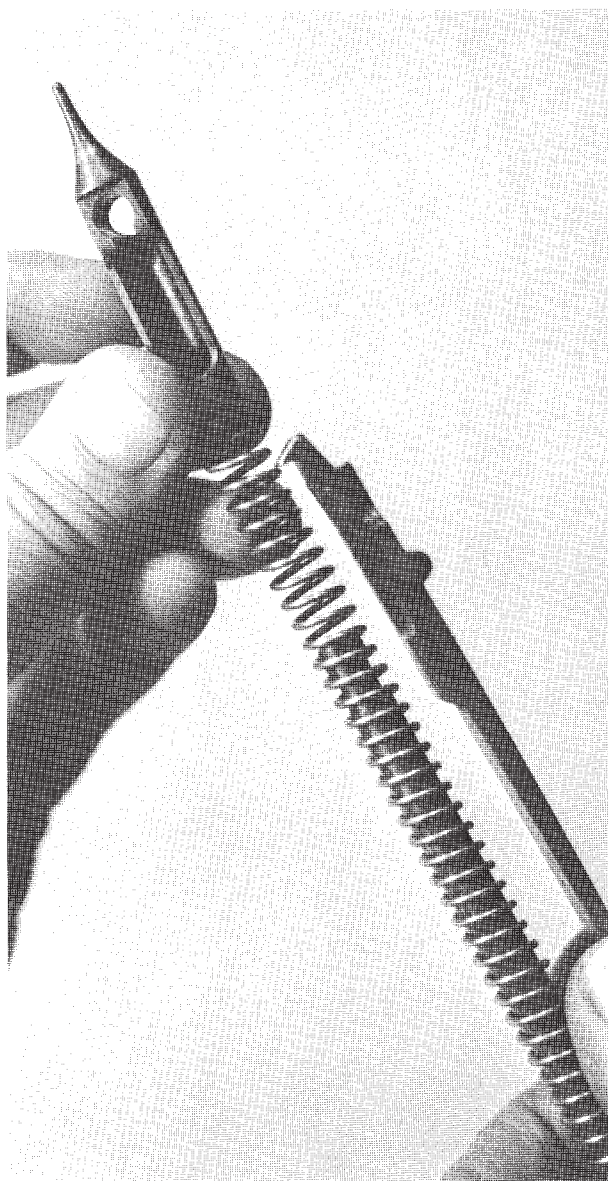


3. To remove the firing pin from the front of the striker rod, grip the spring firmly to restrain it, and tip the firing pin off its doll-head mount, then remove it toward the front. **Caution:** *The striker spring is under compression. Keep it under control, and ease off the tension slowly.*

2. To remove the striker assembly from the rear of the bolt, pull back on the striker knob and turn the sleeve assembly toward the left (rear view) until the front extension of the sleeve clears its lug on the rear of the bolt body. Keep a thumb against the back of the safety-lever to restrain the spring tension, as the sleeve will be pushed toward the rear when the lug is cleared. Remove the sleeve and striker assembly toward the rear.



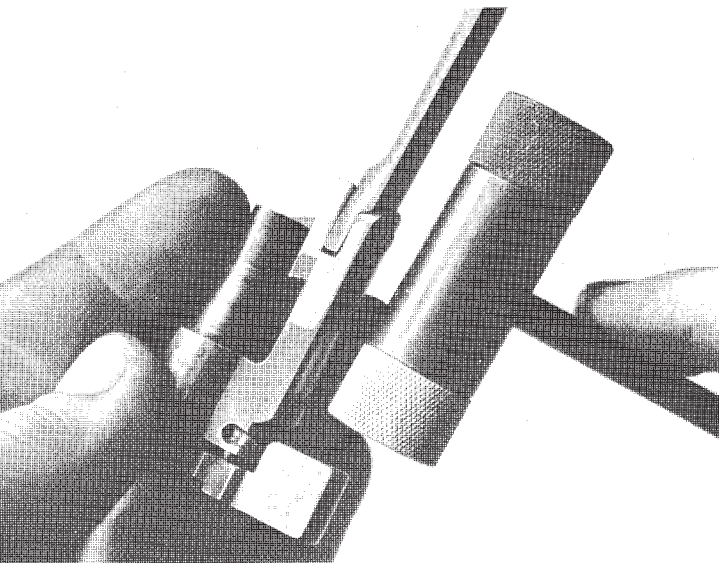
- 4.** Remove the firing pin and striker spring toward the front.



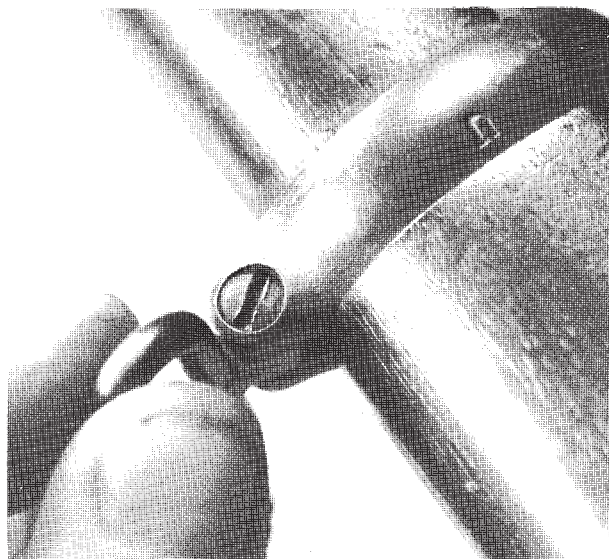
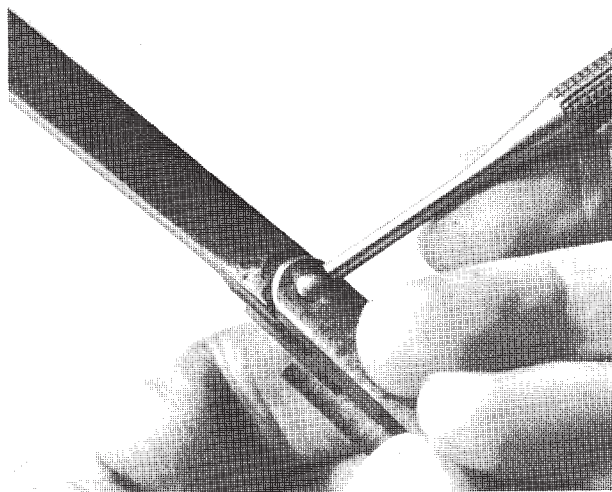
- 5.** Remove the striker knob and rod unit toward the rear.



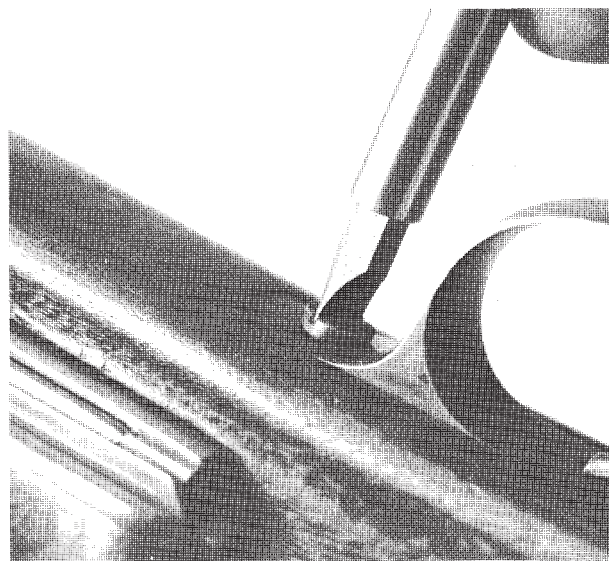
6. To remove the safety-lever, turn it up to the middle position and use a non-marring hammer to tap it out toward the rear. Note that the safety plunger and spring, mounted inside the safety-lever, will be released when they clear the rear of the sleeve, so take care that they aren't lost.



7. The extractor can be removed by drifting out its vertical mounting pin. Note that the pin must be drifted out downward, and take care that the front extension of the sleeve is well supported, to avoid deformation or breakage of the extractor loops.

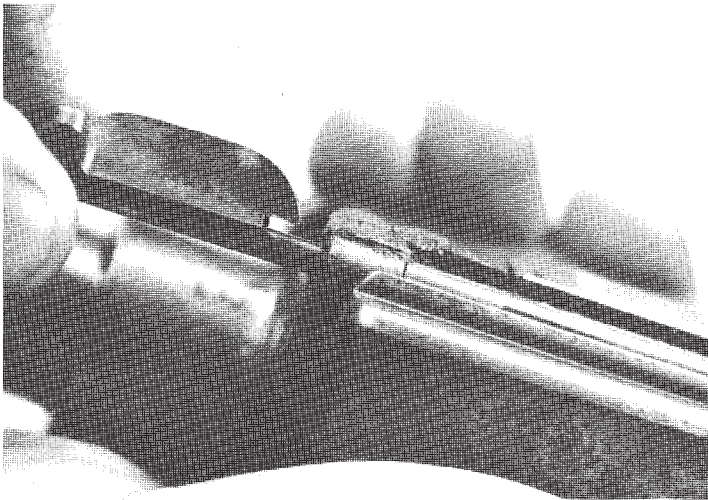


8. Remove the barrel band screw, take off the sling loop and slide the barrel band off toward the front. Note that the gun shown is a modified rifle. If the gun has a full military stock, it will be necessary to first remove the front stock end piece/bayonet mount. If the gun is an original carbine version, depressing a latch bar on the right side will release the band. Removal of the rear band will also release the wood handguard piece, if present, to be taken off forward and upward.

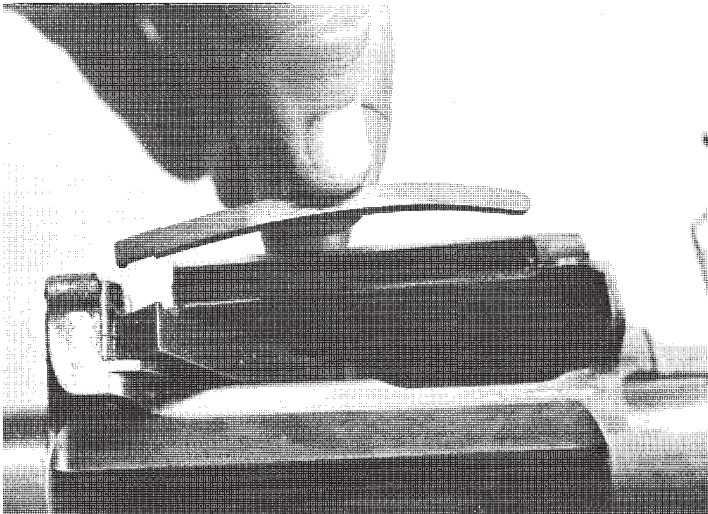
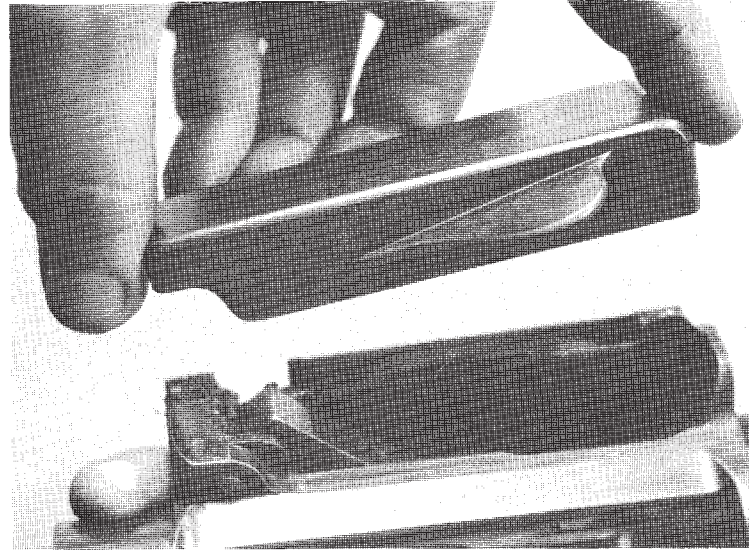


9. Remove the vertical screws on the underside at the front and rear of the trigger guard. Take off the guard downward and separate the action from the stock. Take care to move the action straight upward during removal.

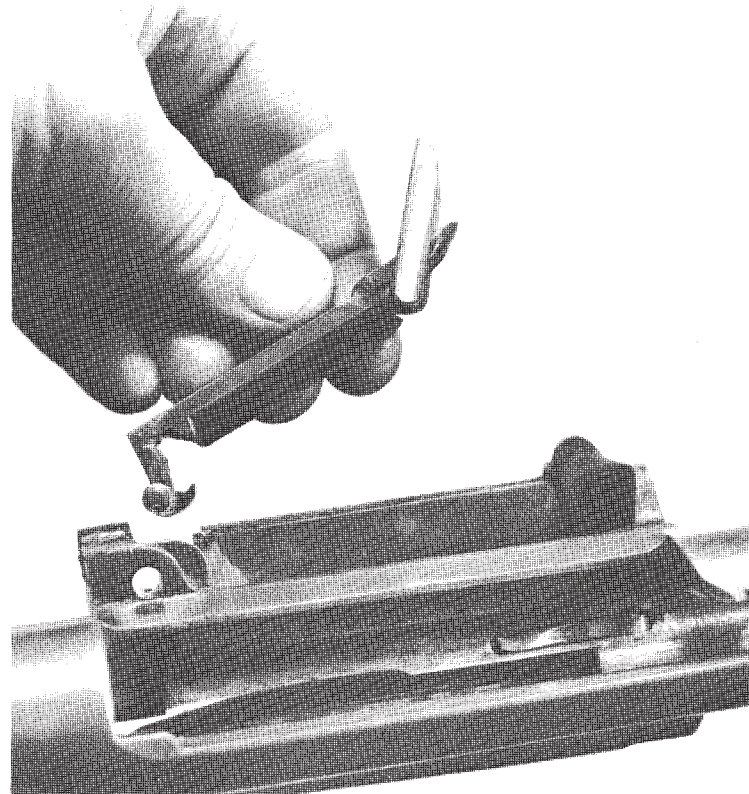
- 10.** Removal of the magazine gate hinge bar must be done carefully, as these are often deformed or broken if certain precautions are not taken. Grip the receiver lightly in a padded vise, exerting slight pressure on the gate to relieve tension on the hinge bar. The front head of the bar is then turned clockwise (front view), swinging its locking plate out of its notch on the receiver. The hinge bar is then removed toward the front. It may be necessary to use a hammer and drift punch on the rear tip of the hinge bar to start it out, but use no extreme force. Remove the hinge bar toward the front.



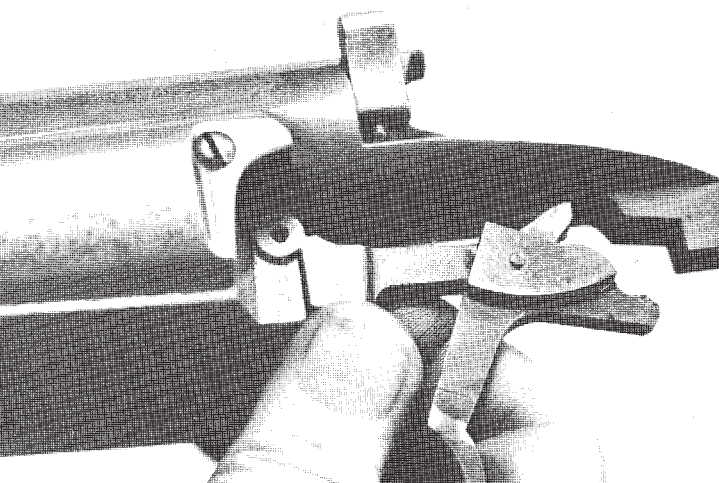
- 11.** Remove the magazine gate toward the right.



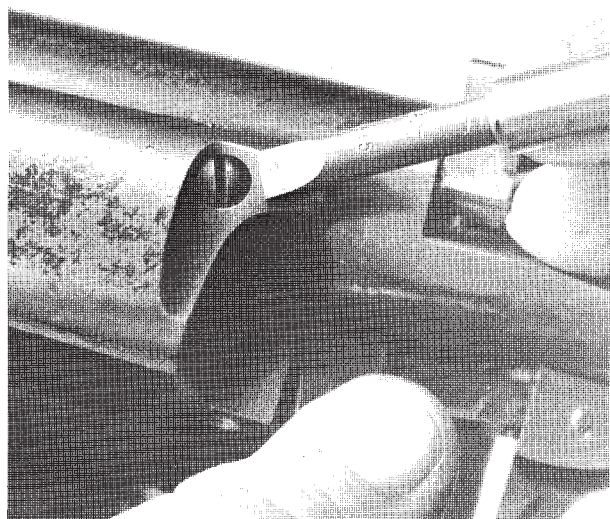
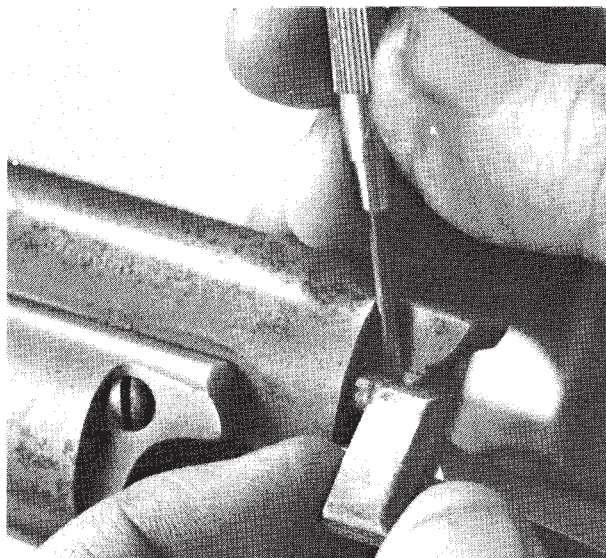
- 12.** Lift the magazine spring out of its recess and remove it.
- 13.** Swing the carrier and follower assembly out to the right, then remove it downward, disengaging its pivot post from the vertical hole in the receiver. The follower is mounted on the end of the carrier arm by a vertical pin. In normal takedown, this assembly is best left intact.



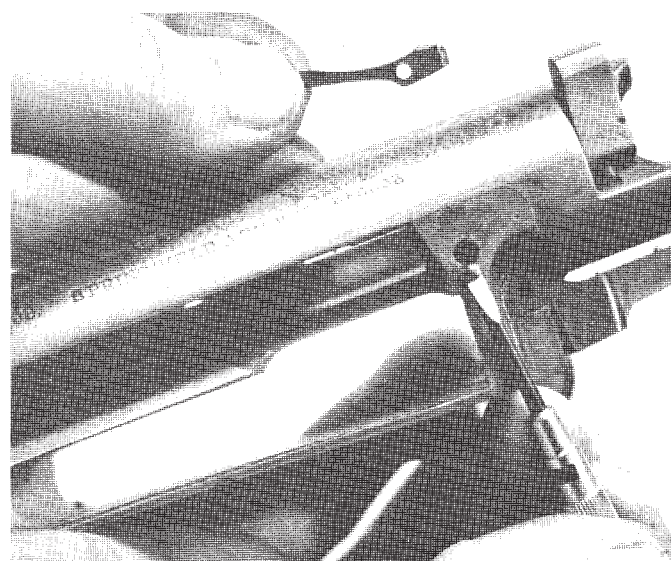
- 14.** Move the trigger forward, to tip the rear of the sear down out of its slot in the receiver, and move the trigger and sear assembly toward the left, out of their pivot-recess. **Caution:** When the sear spring, mounted in the lower front of the sear, clears the edge of the receiver, it will be released toward the front, and it is compressed. Control it, and ease it out. Drifting out the cross pin at the top of the trigger will allow separation of the trigger and sear.



- 15.** To remove the magazine cut-off, it is necessary to insert a small screwdriver to depress the plunger and spring into the cut-off handle while moving the cut-off toward the rear and out of the receiver. **Caution:** The plunger and spring will be released as they clear the rear of the receiver. Restrain them and ease them out.



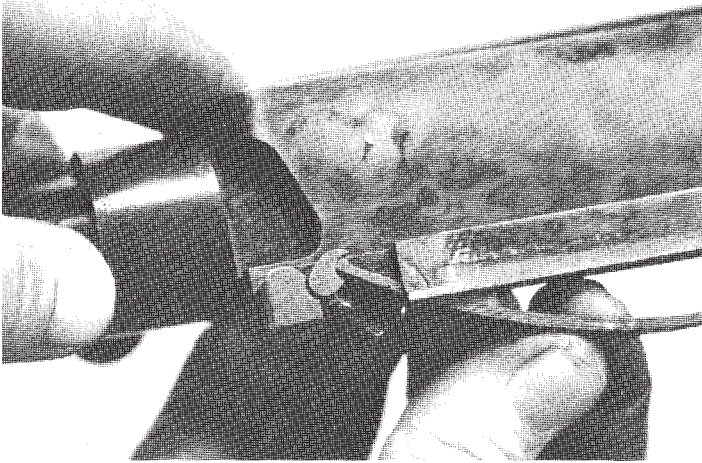
- 16.** A single screw retains the receiver sideplate on the left side. After the screw is taken out, the sideplate is tipped outward and removed toward the rear.



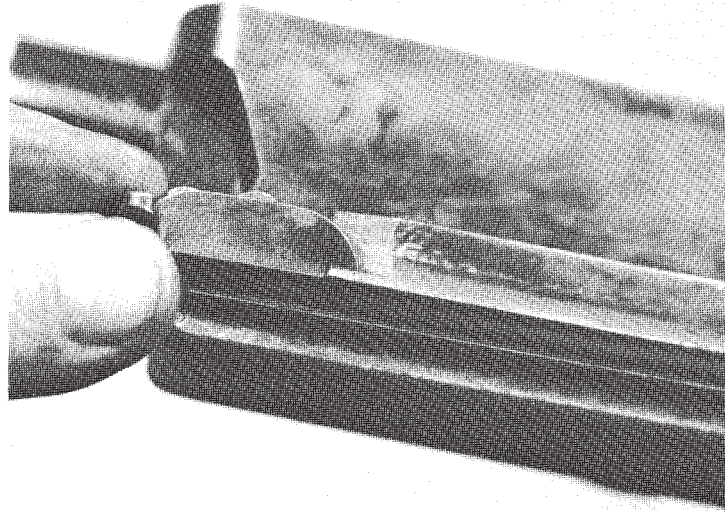
- 17.** Removal of the sideplate will expose a small pin near the screw hole. The pin has a cannellure at its head to facilitate removal. Lifting out this pin toward the left will release the ejector for removal from the floor of the bolt track inside the receiver.

Reassembly Tips:

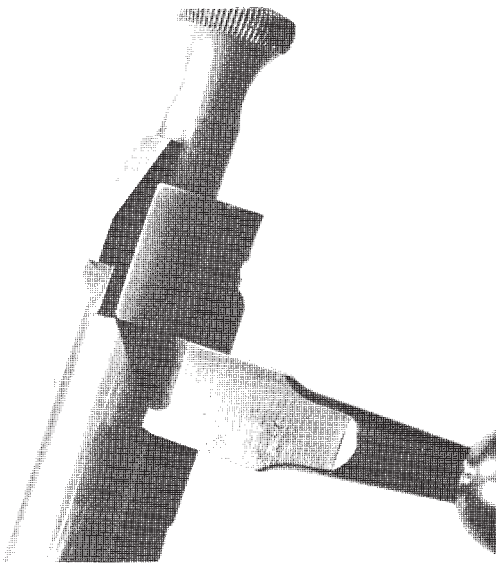
1. When replacing the magazine spring, note that the square off-set end of the spring goes at the front. Be sure the tip of the spring properly engages the lower lobe of the carrier lever.



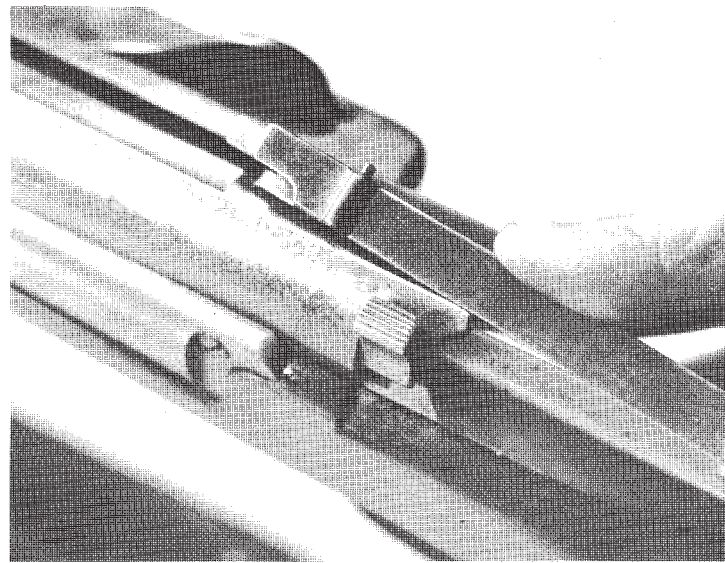
2. When replacing the magazine gate and hinge bar, again grip the receiver lightly in a padded vise, slightly compressing the assembly against the tension of the magazine spring. Be certain that the gate is properly aligned before inserting the hinge bar, and use no extreme force. When the bar is fully reinserted, turn it counter-clockwise (front view) until its lockplate snaps back into its shelf on the receiver, as shown.



3. When replacing the sleeve and striker assembly in the bolt, push on the rear of the safety-lever to move the sleeve forward, against the tension of the spring, until the sleeve can be turned clockwise (rear view) onto its lug at the rear of the bolt. Before the bolt can be reinserted in the receiver, the striker must be recocked by pulling the knob to the rear and turning it clockwise until the front edge of the striker engages its recess at the edge of the cocking ramp, as shown.



4. When replacing the bolt in the receiver, align its forward lug with the open track in the upper rear of the receiver, and move it forward until it can be turned down to the right, following the slope of the inner shoulder of the receiver. At the same time, exert leftward and downward pressure on the extractor as the bolt is turned. The extractor will snap into the open track, and the bolt can then be moved forward.





U.S. Model 1917 Enfield

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the U.S. Model 1903 Springfield also apply to the following guns:

British Pattern 14 (P-14) Rifle

Century International Arms Centurion 14 Sporter

Remington Model 30 Rifle

Data: U.S. Model 17 Enfield

Origin: United States

Manufacturer: Remington Arms Company,
at Ilion, New York, and
Eddystone, Pennsylvania,
and Winchester in
New Haven, Connecticut

Cartridges: 30-06

Magazine capacity: 5 rounds

Overall length: 46.3 inches

Barrel length: 26 inches

Weight: 9 pounds

This rifle was originally developed by the British between 1910 and 1913, and was chambered for an experimental 276-caliber rimless round. When issued as a substitute standard gun for the British forces, the chambering was for the regular 303 British round, and the rifle was called the Pattern 14 (P-14) Enfield. When the U.S. entered World War I, the supply of 1903 Springfield rifles on hand was small, and a number of P-14 Enfields, left over from British contracts, were converted to 30-06, and designated as the U.S. Model 1917 or P-17 Enfield. More than two million U.S.-spec 1917 Enfields were eventually produced. Sporterized 1917s, like the Century Centurion, are mechanically alike, and these instructions generally apply.

Disassembly:

1. Open the bolt, and pull the bolt stop outward, holding it out while removing the bolt toward the rear.



2. For bolt disassembly, do not remove the bolt from the receiver. Lift the bolt handle about half way, and push forward on it, opening a gap between the rear of the bolt sleeve and the front of the cocking piece. Insert a thin piece of steel (a penny works fine, too) into the gap, trapping the cocking piece at the rear. In some guns, pushing the half-lifted handle forward will not open an adequate gap. In this case, open the bolt and move it toward the rear, turn the safety back to the on-safe position, then push the bolt forward until the gap opens and the steel plate can be inserted.



3. Taking care not to dislodge the steel plate, remove the bolt from the receiver as described in step #1, and unscrew the bolt sleeve and striker assembly from the rear of the bolt.





4. With the front of the striker gripped firmly in a padded vise, push the bolt sleeve toward the front, and remove the steel plate inserted earlier. Push the sleeve forward until the rear edge clears the front of the cocking lug, and rotate the cocking piece one-quarter turn in either direction. Remove the cocking piece from the rear of the strike shaft. *Caution: Keep the bolt sleeve under control, as the powerful striker spring is compressed.*

5. Release the spring tension slowly, and remove the bolt sleeve and striker spring toward the rear.



6. Turn the extractor clockwise (rear view) until it is aligned with the gas port, and its front underlug is out of the groove at the front, and push it off its mount toward the front.



- 7.** Insert a drift punch in the hole at the rear of the magazine floorplate, and depress the floorplate latch. Slide the plate slightly toward the rear, and remove it downward, along with the magazine spring and follower. The spring is easily detached from the floorplate and follower by sliding it out of its mounting slots.



- 8.** Remove the cross screw in the front barrel band, slide it toward the front, and take off the front upper hand-guard wood.



- 9.** Drift out the cross pin in front of the rear barrel band, and move the band forward off the stock. It may be necessary to also loosen the sling loop cross screw at the bottom of the band. The rear upper handguard can now be moved forward, and taken off upward.

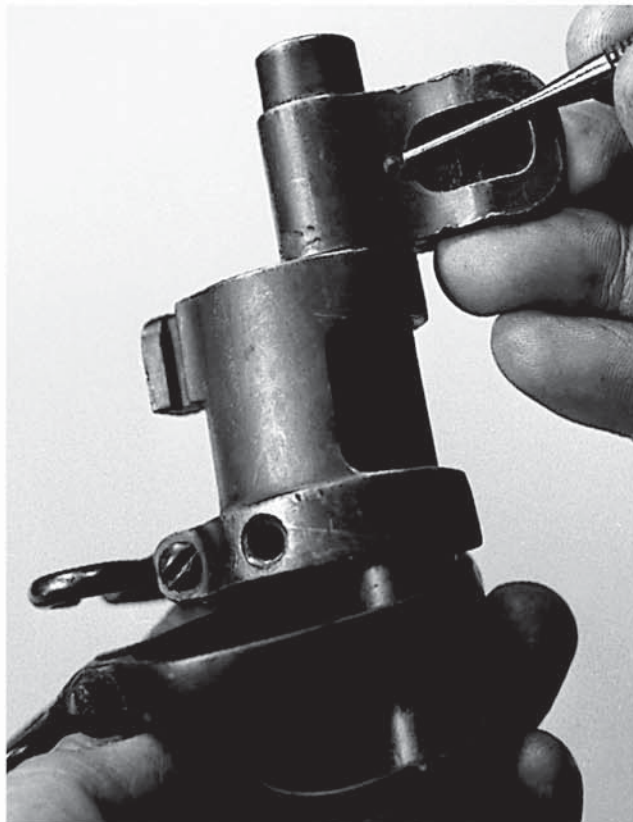


- 10.** Remove the screw on the underside, in the front tab of the trigger and magazine housing. Remove the screw on the underside at the rear of the trigger guard, and separate the action from the stock. The magazine box can be removed from the stock, and the guard and magazine housing can be taken off downward.

- 11.** Drifting out the cross pin in the guard will allow removal of the magazine floorplate latch and its spring upward.



- 12.** Drifting out the cross pin in the front sight will allow removal of the front sight assembly toward the front. This unit is usually tight, and may have to be nudged off with a hammer and nylon drift. Take care not to lose the front sight key, which will be released as the sight is removed. The front band, rear band, and the rear upper handguard ring can now be taken off toward the front.

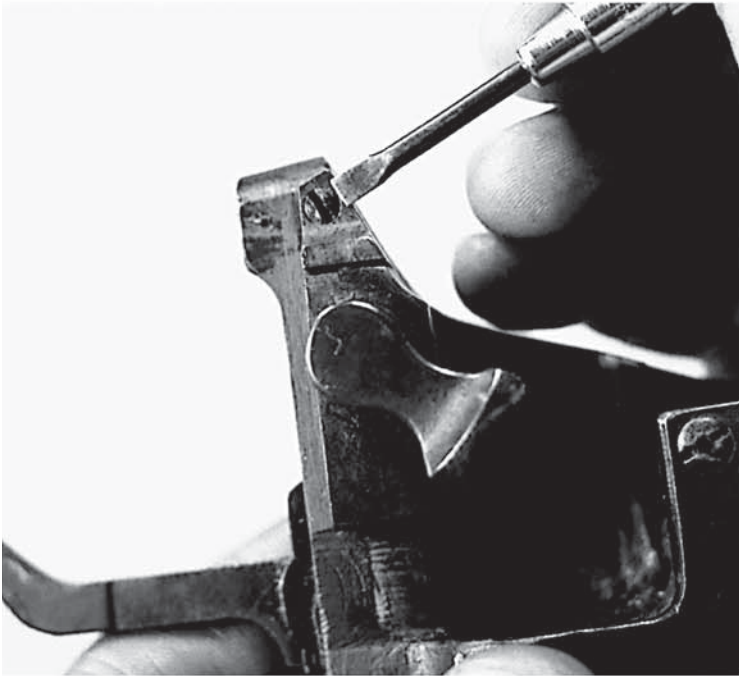


- 13.** Remove the vertical screw that retains the bolt stop, at the left rear of the receiver, and take off the bolt stop and ejector assembly toward the left. The spring rest plug can also be taken out toward the left.



- 14.** Tip the rear tail of the bolt stop spring inward, to lift its front hooks from inside the stop, and remove the spring and ejector toward the rear.

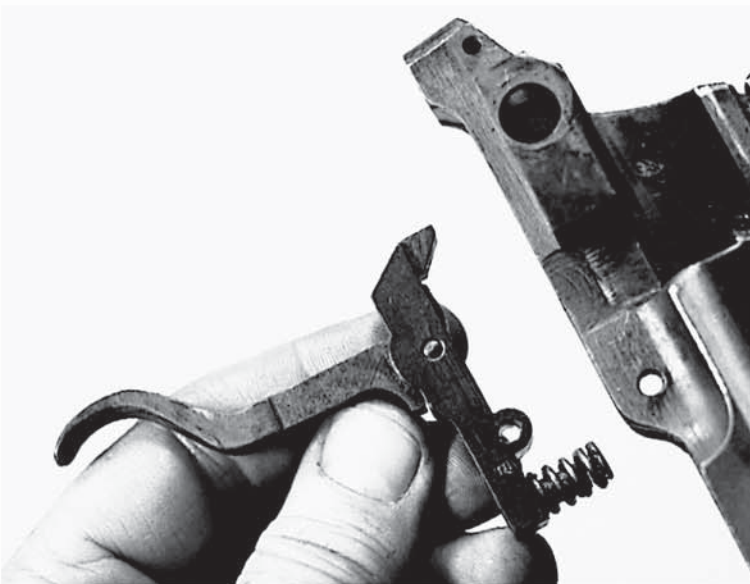
- 15.** Remove the small cross screw at the right rear of the receiver, and take off the safety-lever retainer toward the rear.



- 16.** With the safety-lever in the on-safe position (toward the rear), insert a small-diameter drift punch to depress the safety plunger and spring, and remove the safety toward the right. Restrain the plunger and spring, and ease them out. As the safety is moved toward the right, the drift must be removed to allow the cross piece to pass, then is reinserted to restrain the plunger and spring.



- 17.** Drift out the sear cross pin toward the left. Exert upward pressure on the front of the sear, and the cross pin can be pushed out more easily.



- 18.** Remove the sear, trigger, and sear spring downward. Drifting out the trigger cross pin will allow separation of the trigger from the sear.

Reassembly Tips:

1. When replacing safety-lever, insert a slim tool from the rear to depress the safety plunger and spring while the safety is inserted.



2. When replacing the extractor, after it is started back onto its flanges on the mounting ring, depress the tail of the extractor while lifting the beak at the front, to clear its underlug over the front edge of the bolt. Lift it only enough to clear.



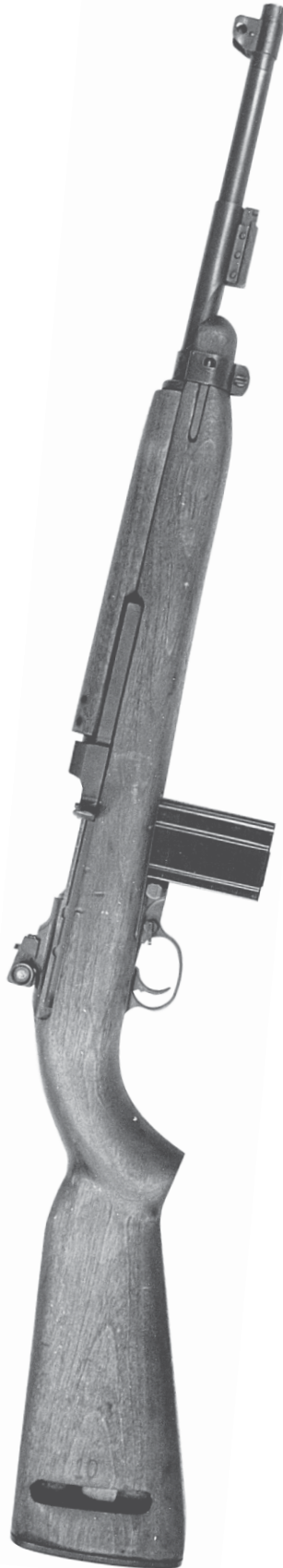
U.S. 30 M-1 Carbine

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the U.S. 30 M-1 Carbine also apply to the following guns:

Iver Johnson M-1 Carbine
Universal M-1 Carbine

Plainfield M-1 Carbine
U.S. 30 M1A1



Data: U.S. 30 M-1 Carbine

Origin: United States

Manufacturer: Winchester, IBM,
General Motors, and
several other contractors

Cartridge: 30 Carbine

Magazine capacity: 15 or 30 rounds

Overall length: 35.6 inches

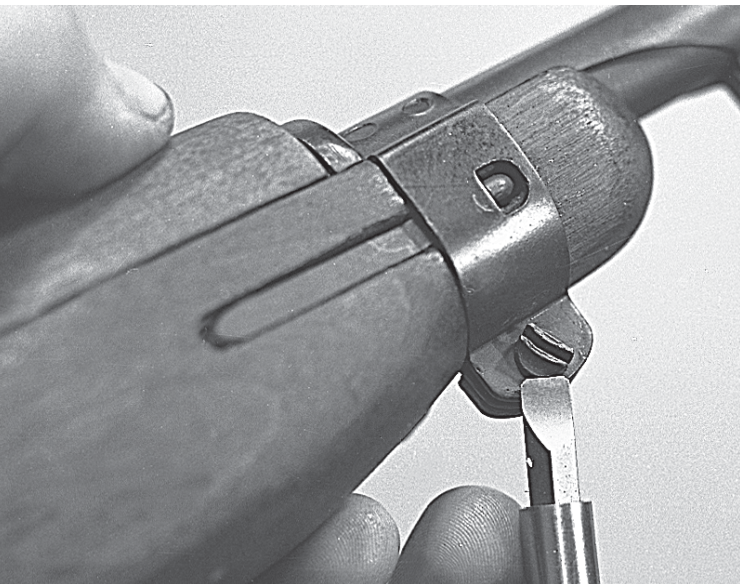
Barrel length: 18 inches

Weight: 5-1/2 pounds

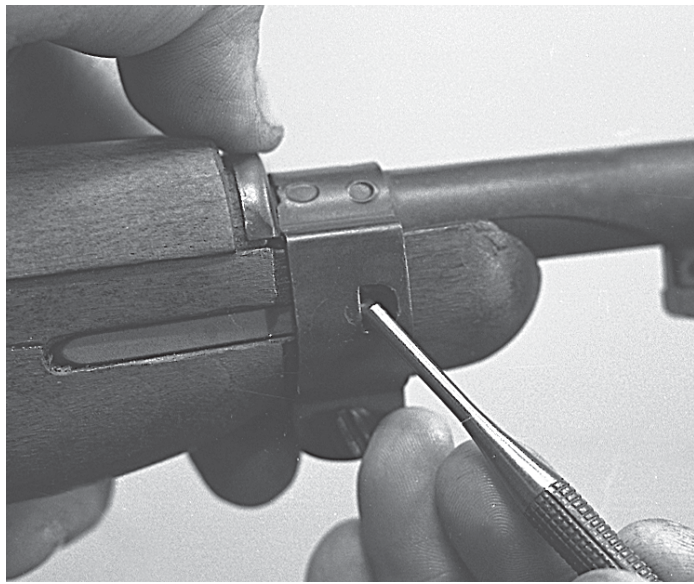
Designed by an engineering group at Winchester, the Carbine was adopted as a U.S. military arm in 1941. Several sub-models were developed later, such as the M1A1 with folding stock, and the M2 selective fire version. With the exception of the parts that pertain to their special features, the instructions for the standard M1, given here, can be applied to the others. Early and late Carbines will have some small differences, such as the change from a flat-topped bolt to a round one, different rear sight, etc., but none of the changes affect the takedown to any great degree. This can also be said of the post-war commercial versions.

Disassembly:

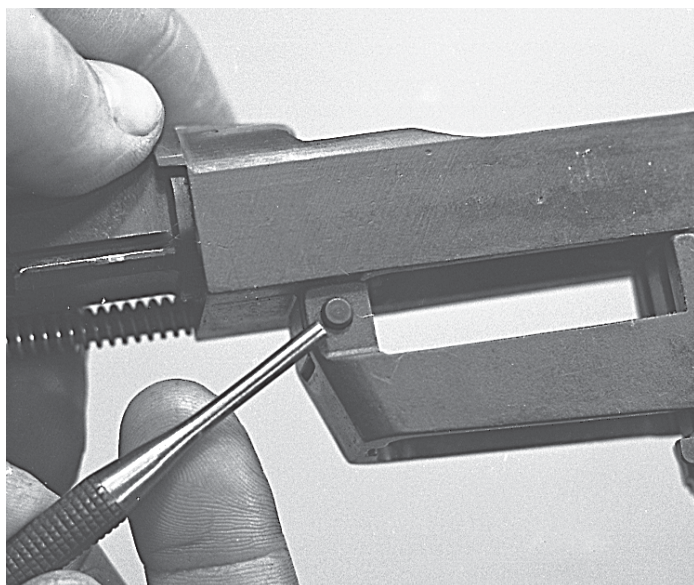
1. Remove the magazine, and cycle the action to cock the internal hammer. Loosen the cross screw in the lower flanges of the barrel band. It should be noted that if a screwdriver is not available, the rim of a cartridge case can be used to turn the specially-shaped screw head.



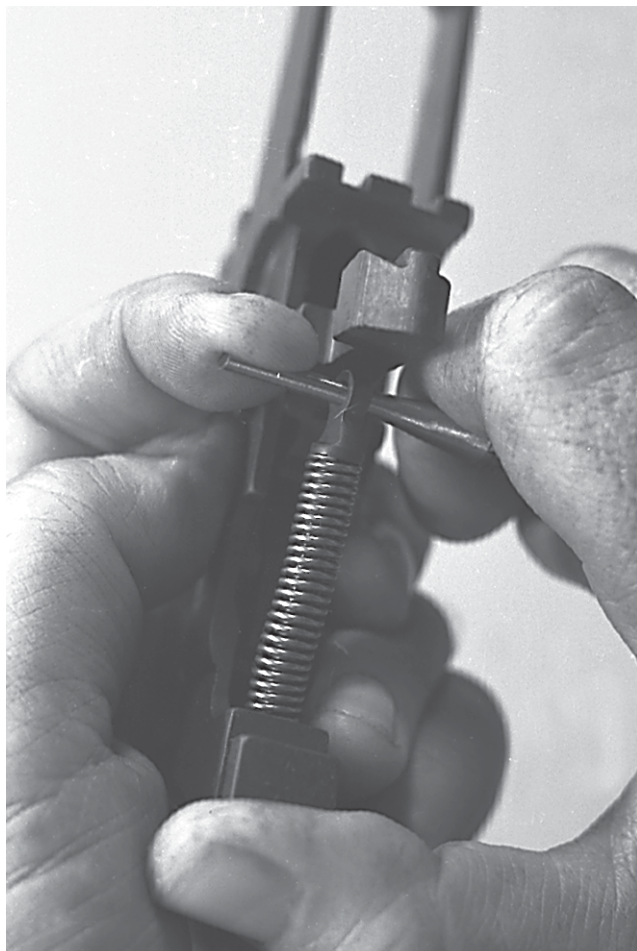
2. Depress the barrel band latch, located on the right side, and slide the band and bayonet mount unit toward the front. Move the upper handguard wood forward, and lift it off. Tip the action upward at the front, unhooking its rear lug, and lift it out of the stock.



3. The barrel band latch can be removed by drifting its cross post toward the right, using the small access hole on the left side of the stock. Backing out the vertical screw in the tail of the recoil plate will allow removal of the plate upward.

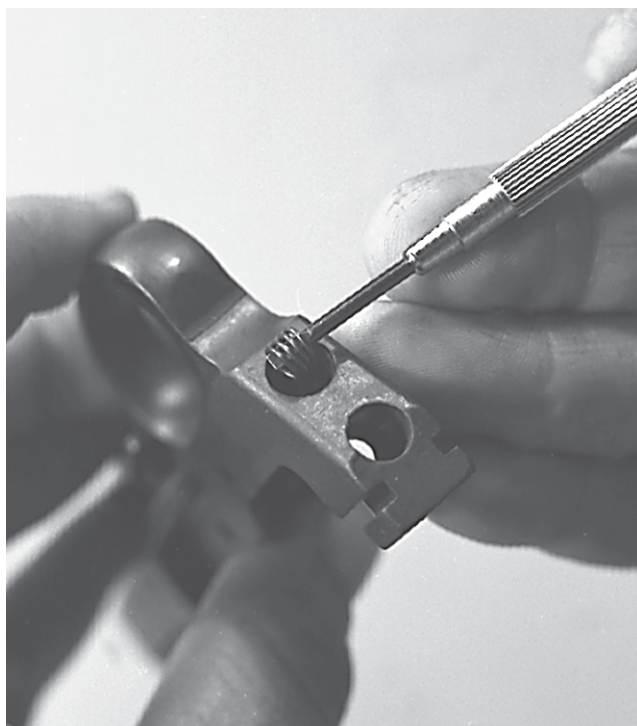


4. Push out the cross pin at the front of the trigger housing, move the housing forward, out of its slots at the rear, and remove it downward.

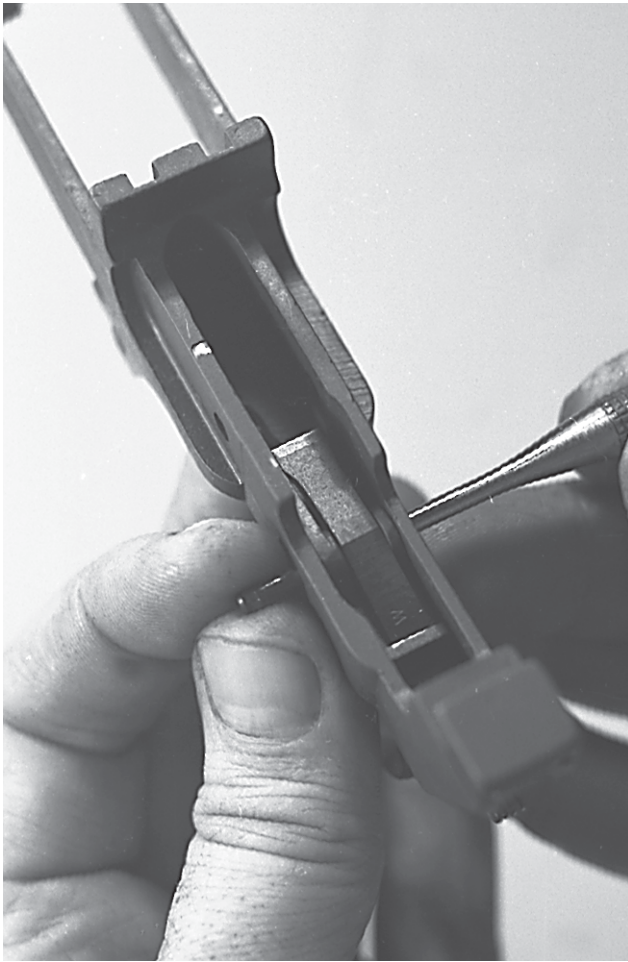


- 5.** Restrain the hammer, pull the trigger, and ease the hammer down to the fired position. Insert a drift punch through the hole in the front of the hammer spring rod, move the rod toward the rear, and lift its head out of its seat in the back of the hammer. Caution: *The spring is under heavy tension, so control it as the rod and spring are eased out upward, and toward the left for removal.*

- 6.** Take out the hammer pivot pin, and remove the hammer upward.

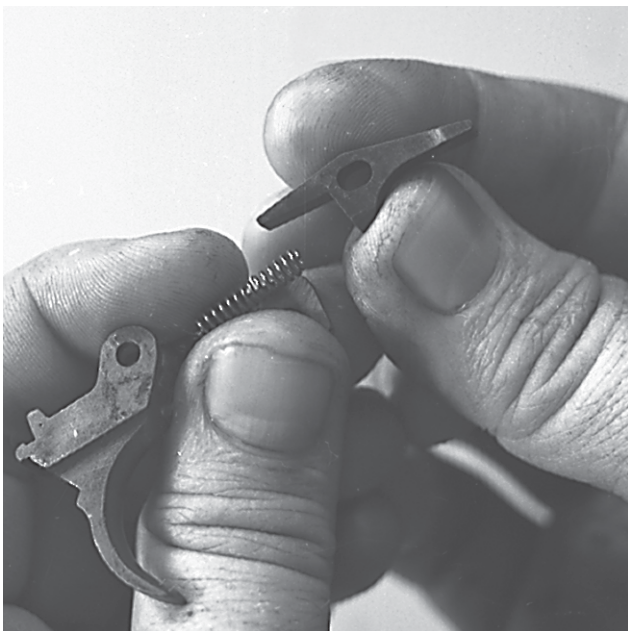
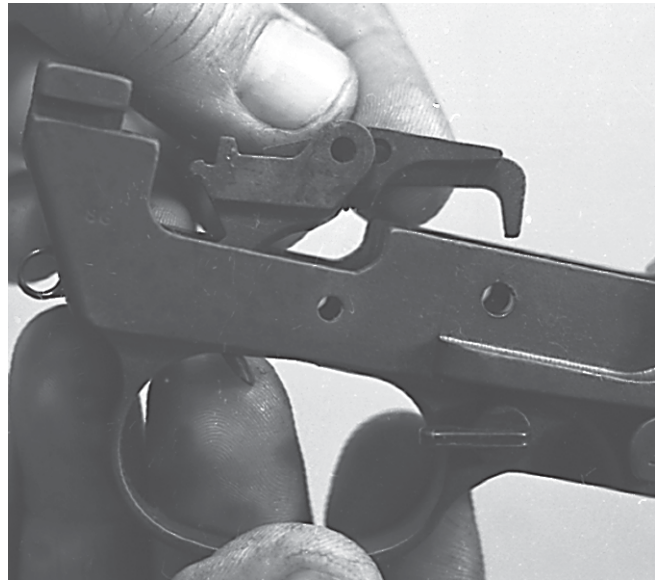


- 7.** Insert a small tool at the rear of the trigger housing, and pull the trigger spring toward the rear until it stops, about as far as shown.

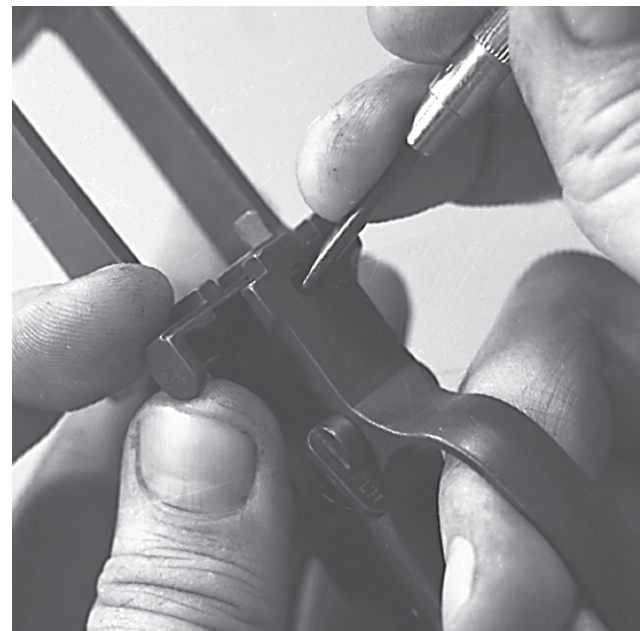


- 8.** Restrain the sear, inside the trigger housing, and push out the trigger pin toward either side.

- 9.** Remove the sear, sear spring, and trigger upward.



- 10.** The sear and its spring are easily detached from the top of the trigger. After the trigger is removed, the trigger spring can be moved forward out of its well at the rear of the housing and taken out.

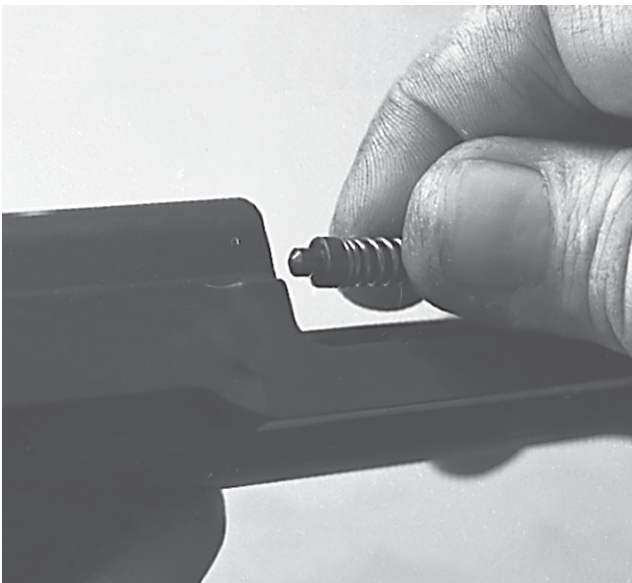
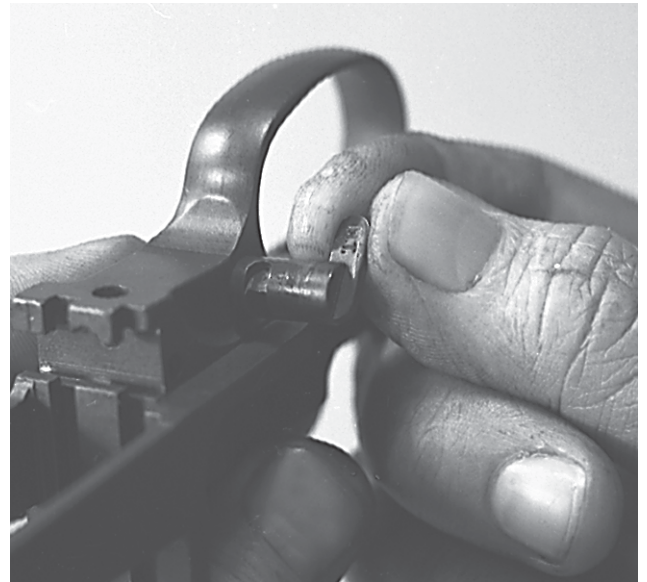


- 11.** Insert a small screwdriver into the hole on the underside of the trigger housing, below, below the magazine catch, and push the catch retaining plunger toward the rear, holding it there while moving the catch out toward the right, along with its spring and plunger.

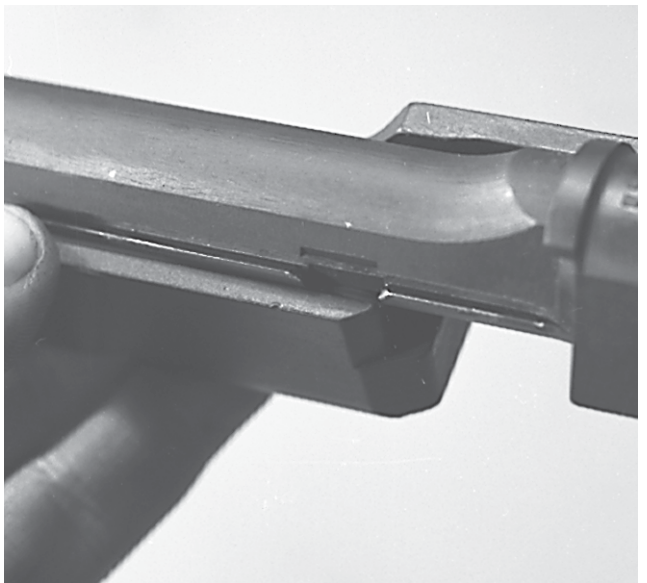


- 12.** Remove the magazine catch retaining plunger toward the front, slowly releasing the tension of its spring. Remove the spring, and the rear plunger which positions the safety. The two plungers are identical, and need not be kept separated.

- 13.** Remove the safety-catch toward the right.

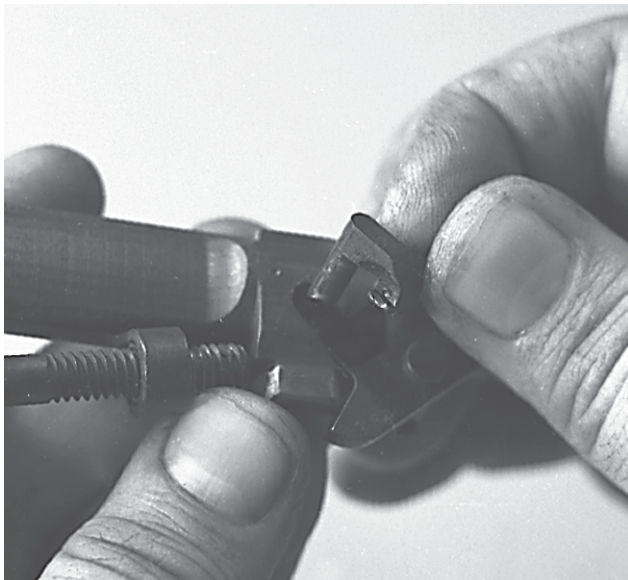
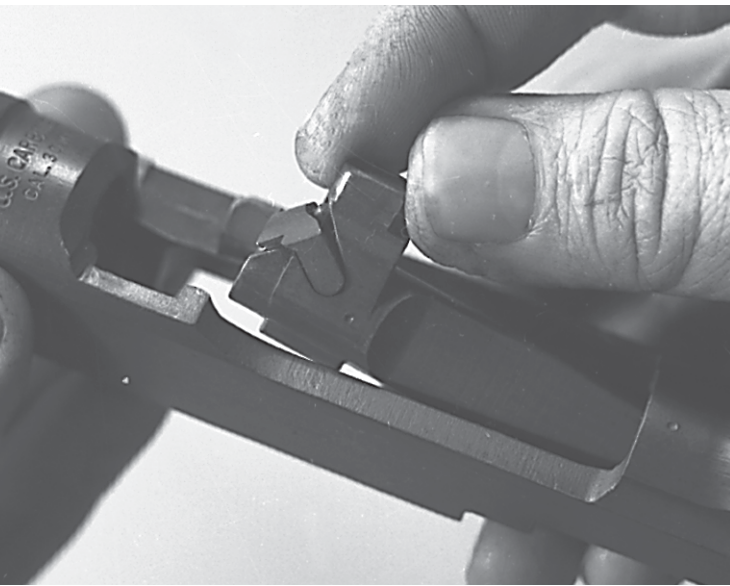


- 14.** Grip the action slide spring and its guide rod firmly, just behind its front tip, and move it just far enough toward the rear to disengage its front stud from the recess on the back of the action slide. Tip the rod and spring away from the slide, and slowly ease the tension, removing them toward the front.



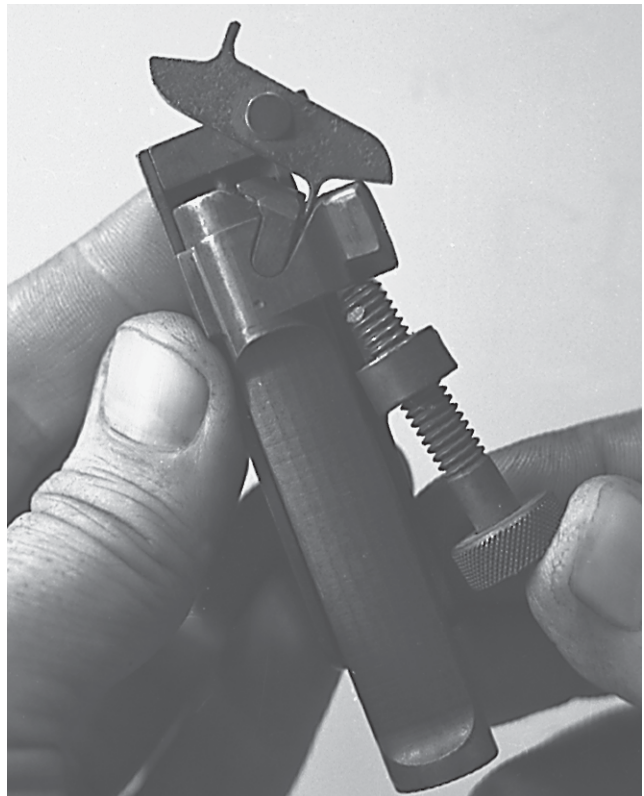
- 15.** Move the action slide toward the rear until its inner projection on the left side is aligned with the exit cut in the barrel groove. Turn the slide toward the left and downward, disengaging the inner projection from the groove. At the same time, the rear lug of the cocking handle will be aligned with its exit cut in the receiver track, and the action slide can be removed.

- 16.** Move the bolt to the position shown, and lift its right lug upward and toward the right. Rotate the bolt, and remove it upward and forward.

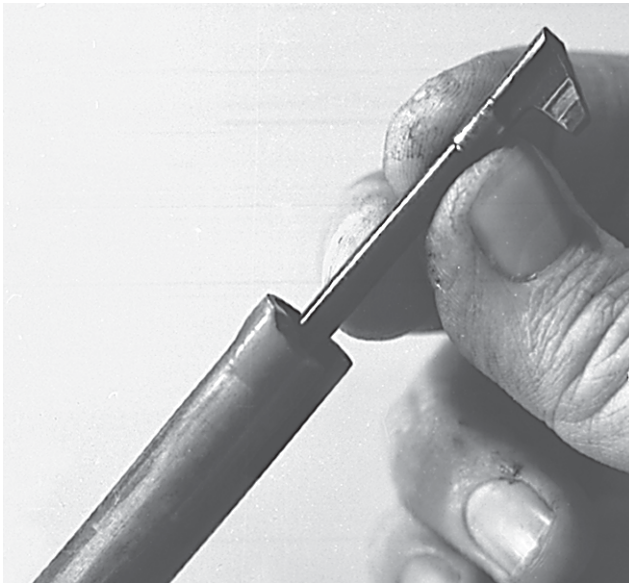


- 18.** A hole is provided in the underside of the tool for pushing out the extractor, and it is removed upward.

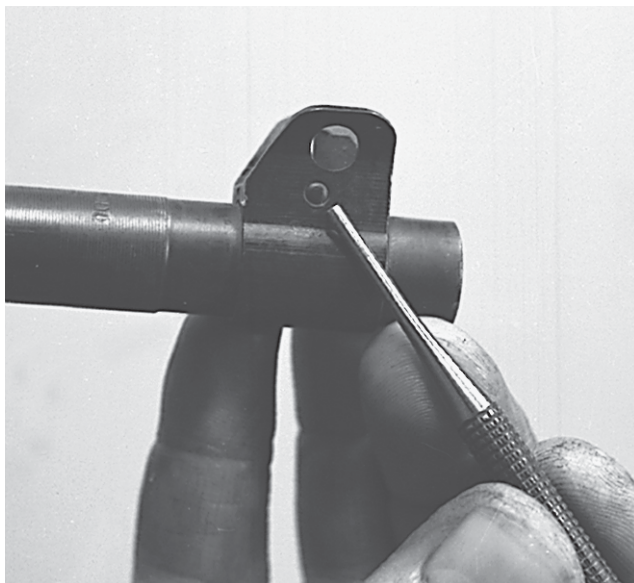
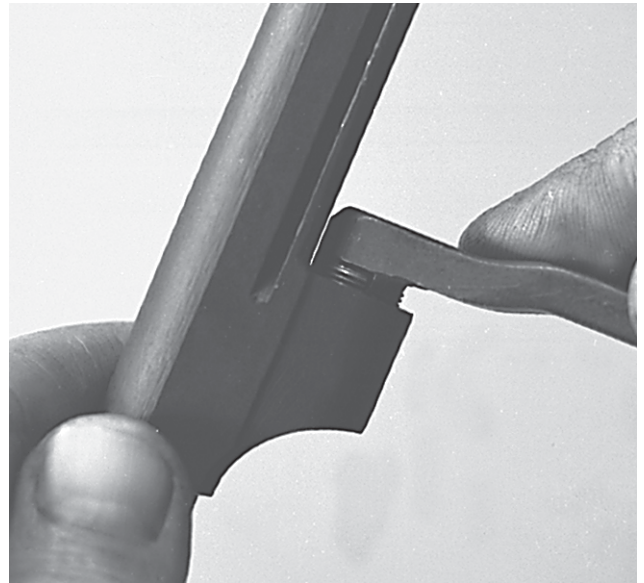
- 17.** Disassembly of the bolt is much easier if the special military tool is used. The knurled knob of the screw is turned to back it out, the bolt is laid in the tool, and the knob tightened, pushing the disassembly nose on the rotary piece against the extractor plunger. At the same time, the ejector is depressed by a post in the front of the tool. With these two parts held in place, the extractor is easily lifted out, the screw backed off, and the other parts removed. In the photo, the tool is shown with the screw tightened, ready for removal of the extractor. It is possible, without the tool, to use a small screwdriver to depress the extractor plunger. If this method is used, be sure to restrain the ejector, as it will be released when the extractor shaft clears its retaining cut.



- 19.** After the extractor is removed, the screw on the tool is backed off, and the ejector and its spring are removed toward the front. The extractor plunger and its spring can be taken out of their hole at the base of the lug, and the firing pin can be removed from the rear of the bolt.



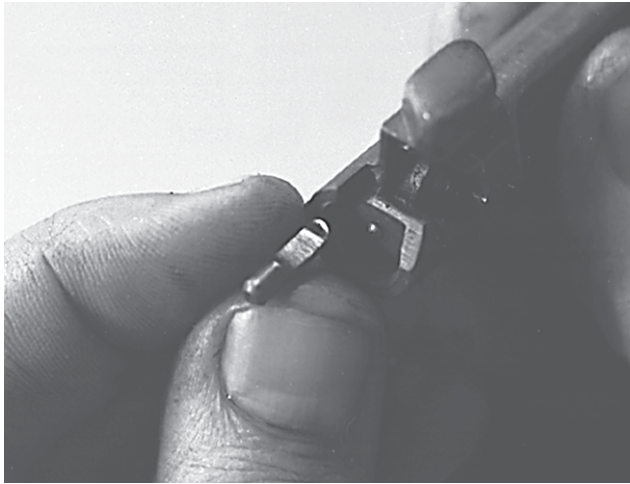
- 20.** To remove the gas piston, it is best to use the standard military wrench designed for this. The retaining nut is simply unscrewed, and the piston is taken out toward the rear. It is possible to remove the nut without the wrench, with pliers, for example, but the nut is sure to be damaged.



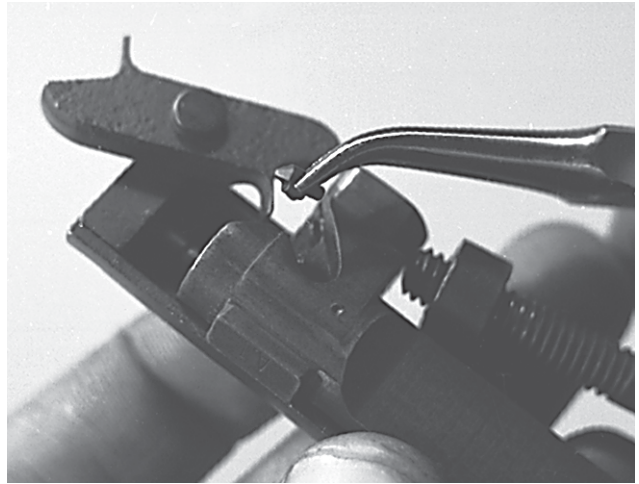
- 21.** The front sight can be removed by drifting out its cross pin, and using a non-marring punch to nudge it off toward the front. When the sight is taken off, be sure the small key inside it is not lost. The barrel band unit can be taken off after the sight is removed.

Reassembly Tips:

1. When replacing the ejector in the bolt, be sure the ejector is oriented as shown for proper engagement with the extractor post.



2. When replacing the tiny extractor plunger, be sure the notch on the plunger is oriented downward, as this surface locks the extractor in place.

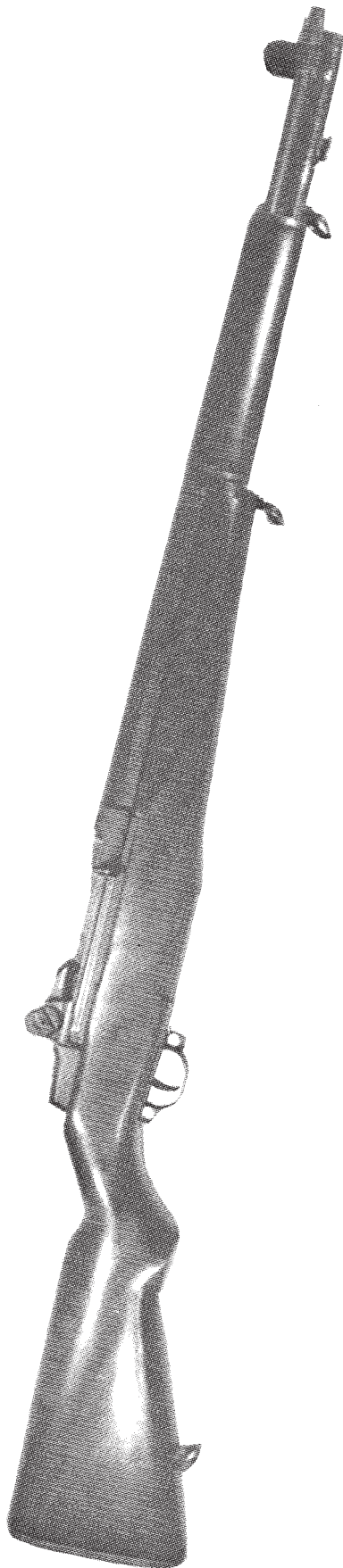


3. When properly assembled, the extractor and its plunger will be engaged as shown.

4. During replacement of the action slide, position the bolt as shown, then bring the slide onto the bolt lug and move it into place in its track.

Insert the trigger spring from the front, and push it back to the temporary rear position, just as in disassembly. After the trigger/sear system is installed, move the spring back toward the front, lifting its forward end to drop into the groove at the upper rear of the trigger.





U.S. M-1 Garand

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the U.S. M-1 Garand also apply to the following guns:

Beretta BM-59

Springfield Armory M-1 Garand

Data: U.S. M-1 Garand

Origin: United States

Manufacturer: Springfield Armory,
Winchester, and other
contractors

Cartridge: 30-06 Springfield

Magazine capacity: 8 rounds

Overall length: 43.6 inches

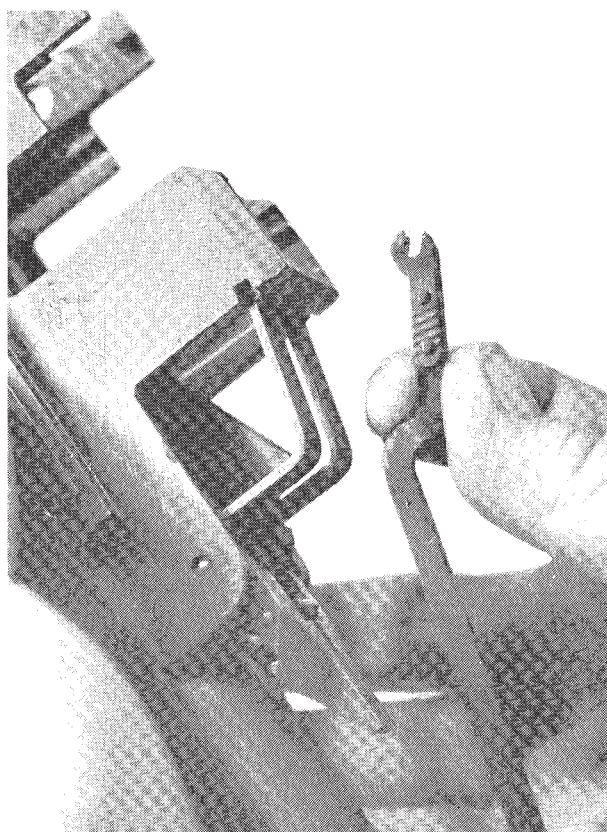
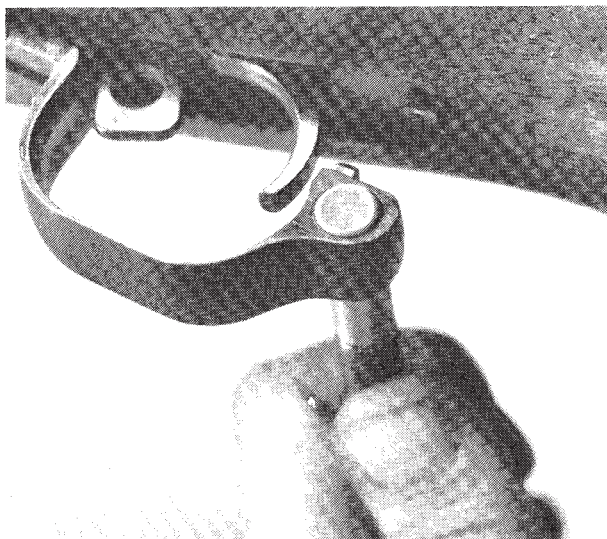
Barrel length: 24 inches

Weight: 9-1/2 pounds

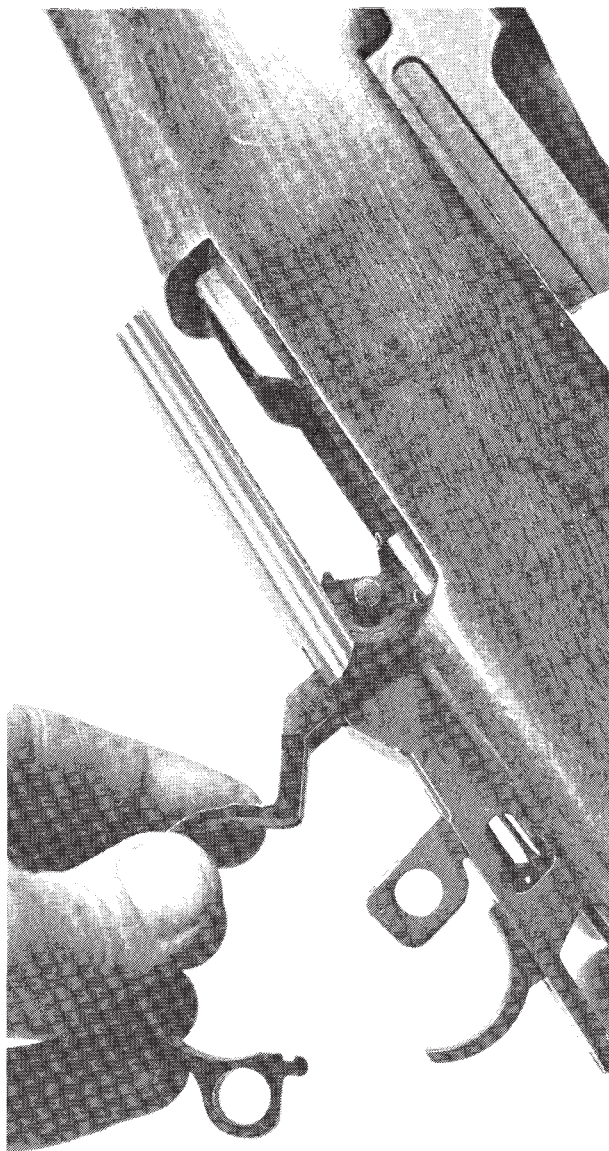
Although it may seem overweight and unwieldy in comparison with today's ultra-modern assault rifles and carbines, the old Garand was the finest military rifle of its day. It was adopted as U.S. military standard in 1936, and served us well through World War II, the Korean conflict, and into the Viet Nam war. The trigger group mechanism is a particularly fine piece of engineering, and in slightly modified form lives on today in the Ruger Mini-14. The weakest point is the magazine system, where a complicated assortment of levers and arms somehow succeed in feeding the cartridges with excellent reliability.

Disassembly:

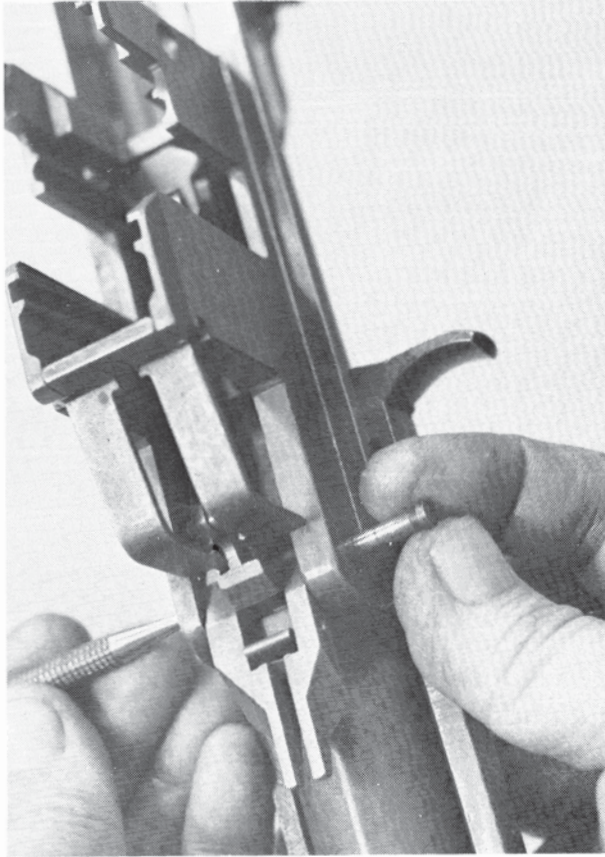
1. With the internal hammer cocked, the bolt closed, and the safety in the on-safe position, insert a rod or drift punch through the transverse hole at the rear of the trigger guard, and pull it toward the rear and outward, pivoting the guard downward and toward the front. Some late-production guns don't have a hole in the trigger guard, so simply pull toward the rear with the fingers or a non-marring tool.



2. Remove the trigger group downward. Push the buttstock downward, pivoting the receiver and barrel group upward at the rear, and remove the buttstock assembly.

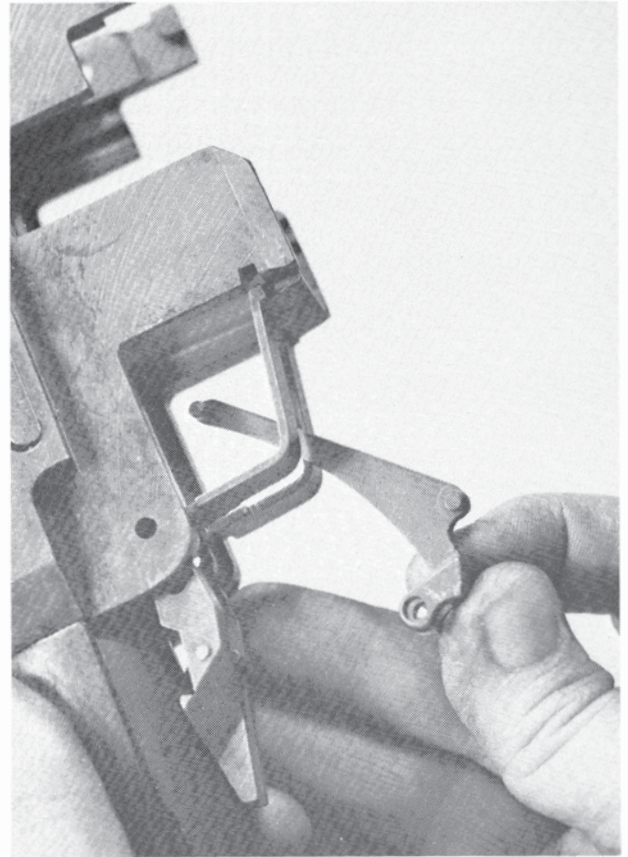


3. Grip the serrated surfaces on the sides of the rear tip of the follower rod, and move it forward, unhooking it from the follower arm. Slowly release the spring tension, and remove the follower rod and spring toward the rear.

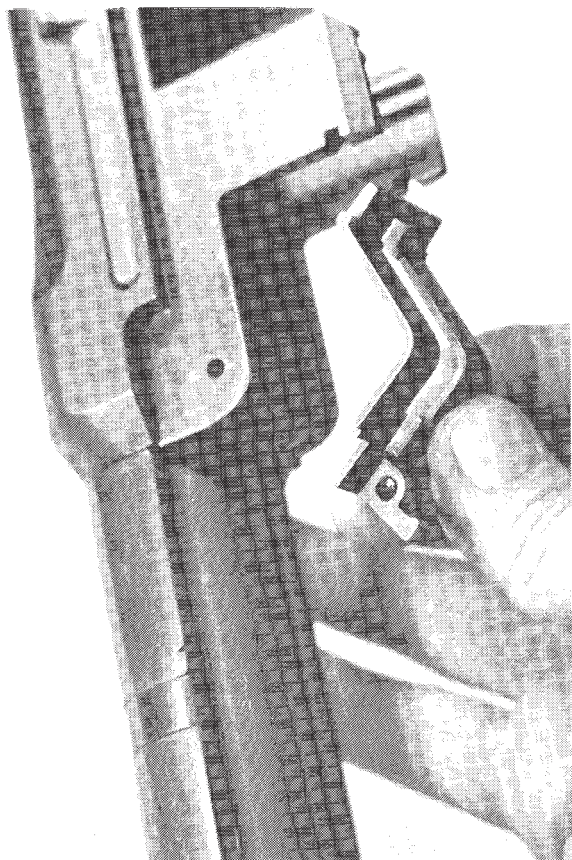


- 4.** Remove the cross pin that pivots the follower arm, pushing it out toward the right.

- 5.** Remove the follower arm, and the operating rod catch, with its attached accelerator, toward the front.

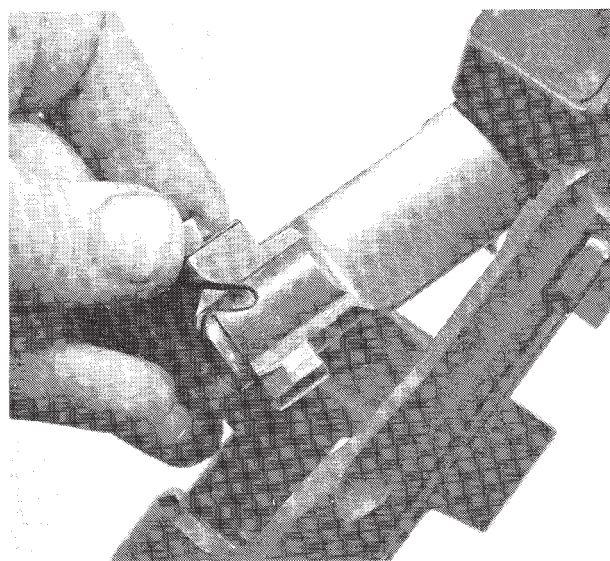
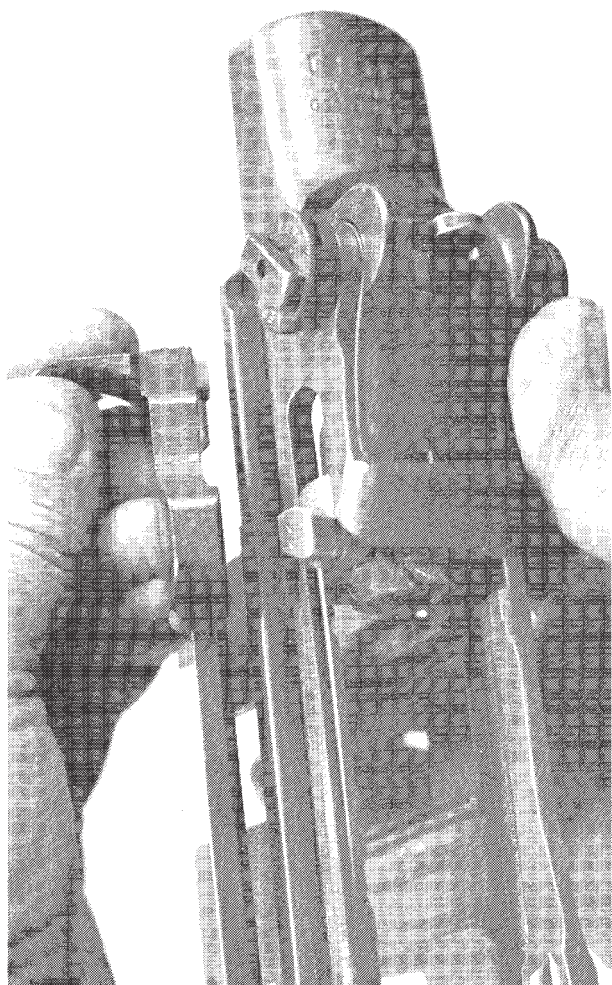
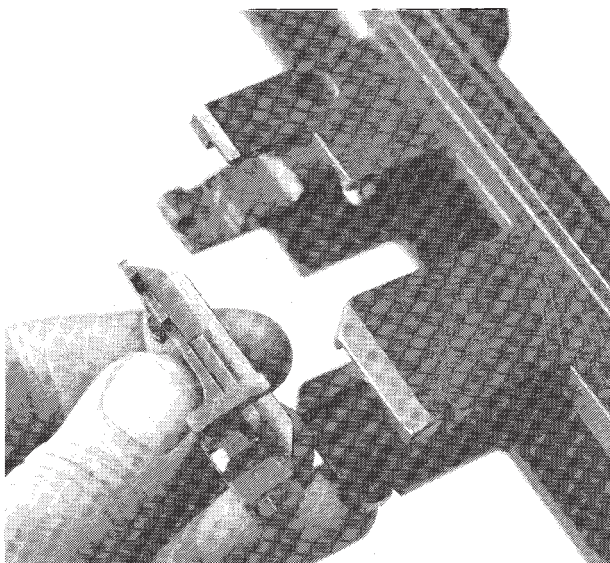


- 6.** The accelerator is mounted in the operating rod catch by a cross pin, and separating these parts is not recommended in normal disassembly.



7. Remove the cartridge guide from the front of the magazine housing.

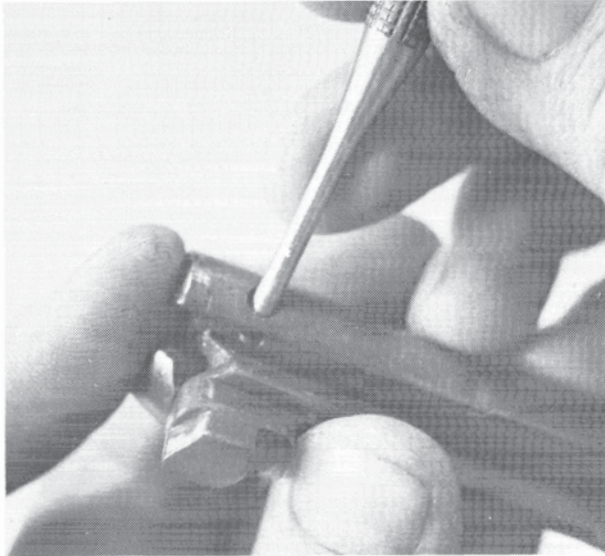
8. Remove the follower assembly from the bottom of the magazine housing. Disassembly of the magazine follower is definitely not recommended.



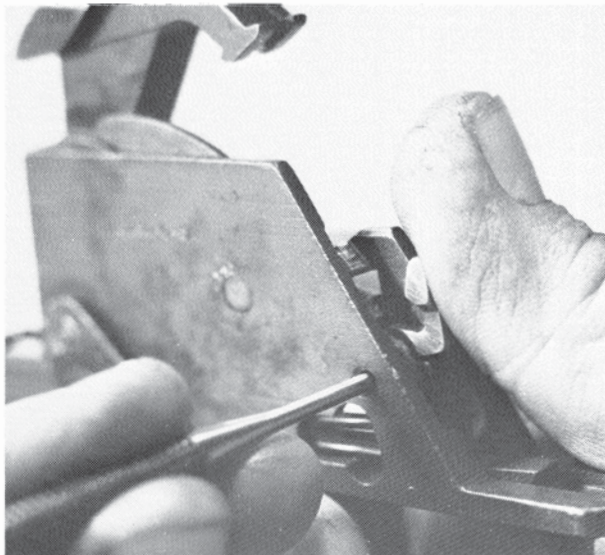
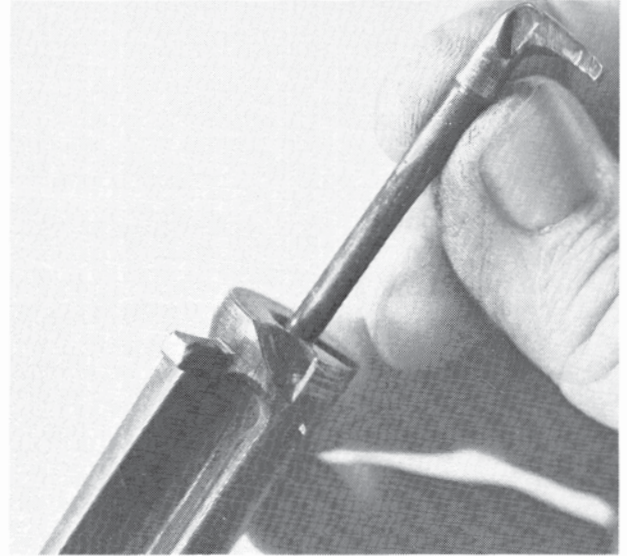
10. Move the bolt back toward the front, until its front is about an inch from the rear of the barrel shroud, then remove it upward and toward the front, lifting it slightly toward the right.

9. Move the operating slide and bolt toward the rear until the lug on the inside of the handle is aligned with the exit cut in the slide track. Push the handle upward, then out toward the left, and turn the slide for removal toward the rear.

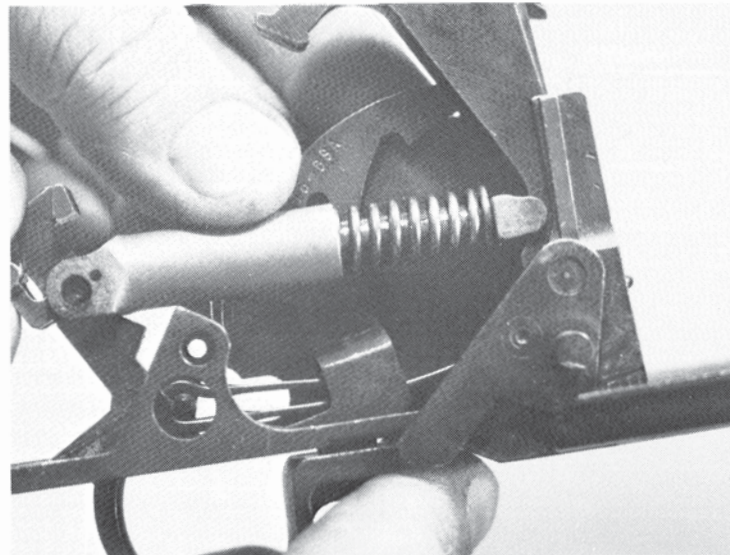
- 11.** When disassembling the bolt, a Garand tool is helpful, but not absolutely necessary. It is not difficult to depress the extractor plunger with a small screwdriver while lifting the extractor out of its recess upward. **Caution:** *The ejector will be released as soon as the extractor post clears its retaining cut, and the ejector spring is quite strong, so control it and ease it out.*



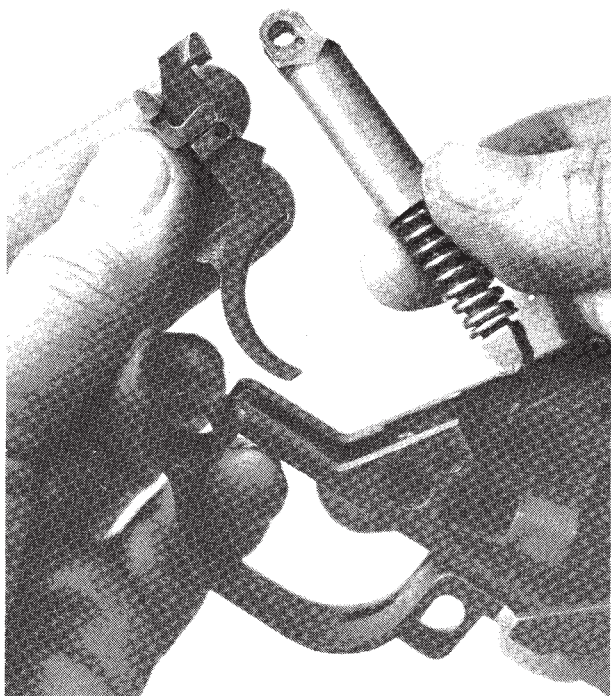
- 12.** Remove the firing pin from the rear of the bolt.



- 13.** Snap the trigger guard back into place, release the safety, restrain the hammer, and pull the trigger. Lower the hammer to the fired position. Exert pressure on the rear of the sear, to slightly compress the hammer spring and relieve tension on the trigger pin, and drift out the trigger pin toward the right. **Caution:** *The hammer spring is quite strong, so keep firm pressure on the back of the sear.*

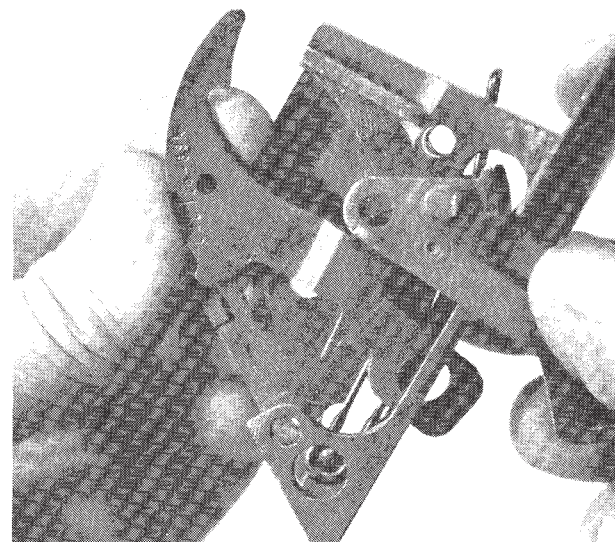
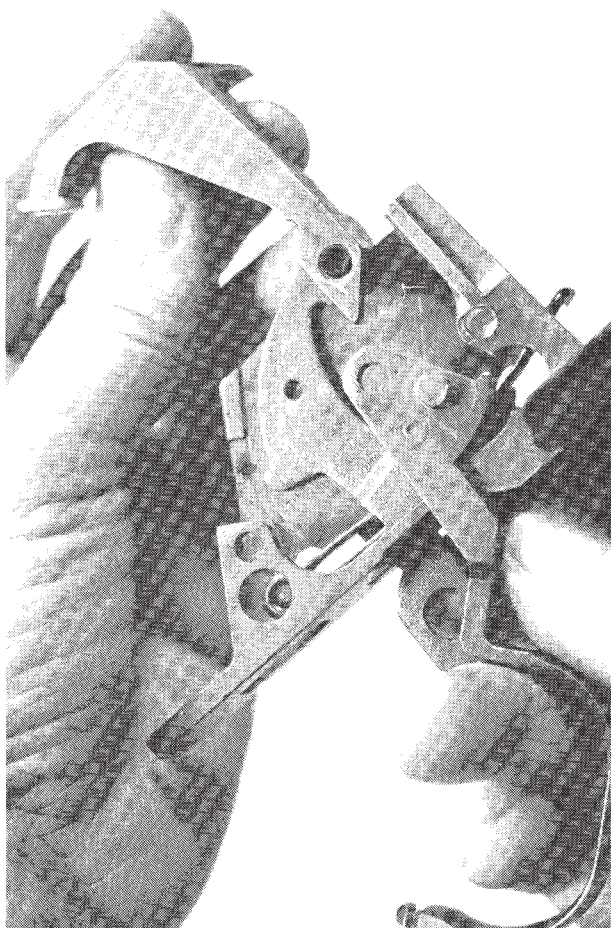
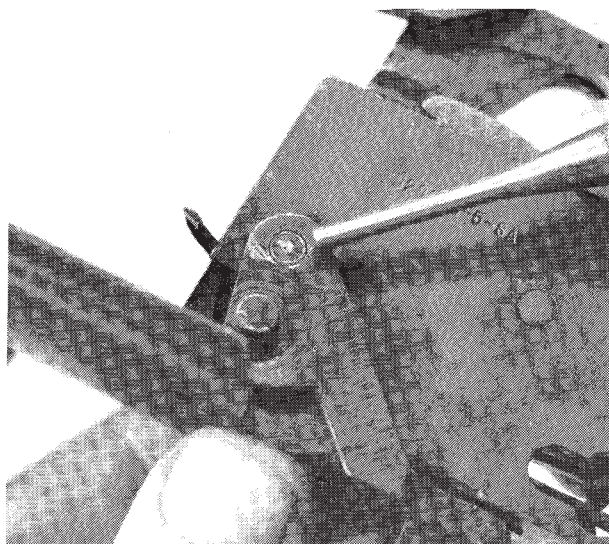


- 14.** Slowly release the spring tension, allowing the trigger/sear assembly and the hammer spring housing to move upward and toward the rear. Control the hammer spring housing with downward pressure, as it will tend to climb out.

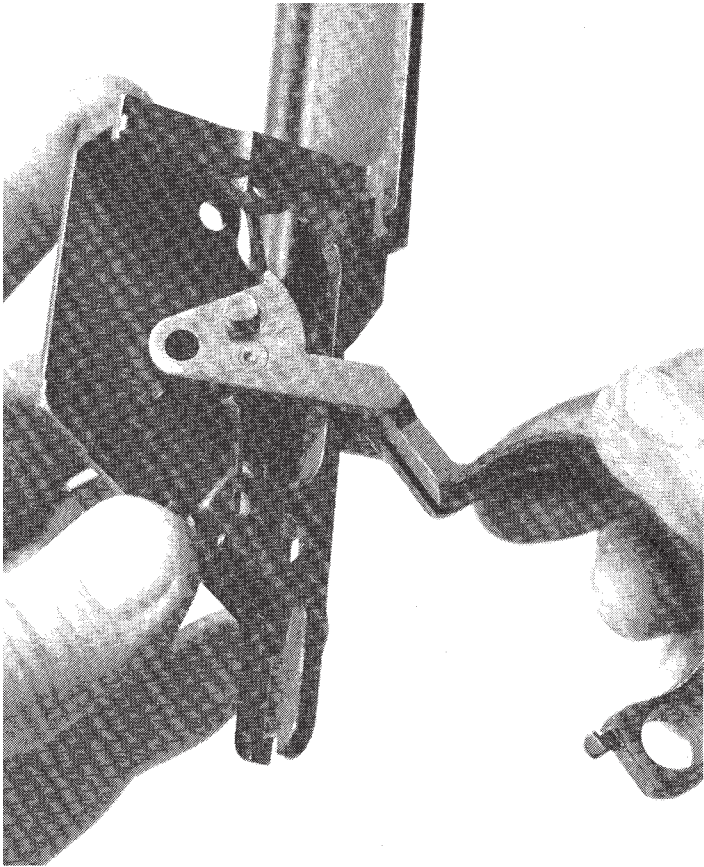


- 15.** Remove the hammer spring housing, the spring, and the hammer strut upward and toward the rear. Remove the trigger/sear assembly upward. The sear is cross-pin-mounted on the trigger, but these parts should not be separated in normal disassembly.

- 16.** Push out the hammer pivot pin toward the right.

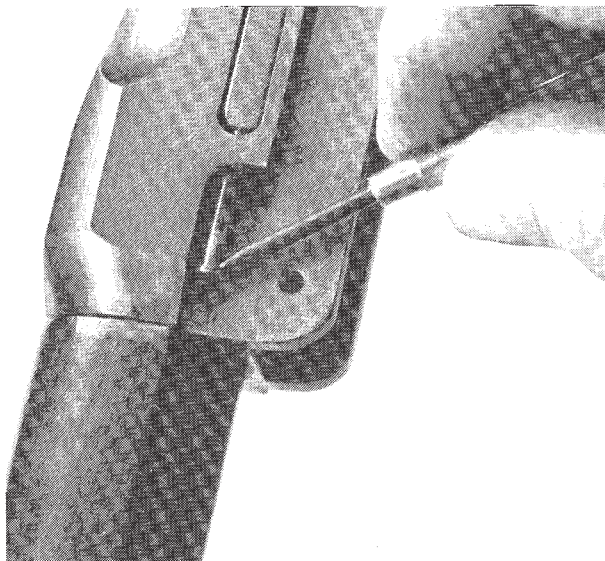
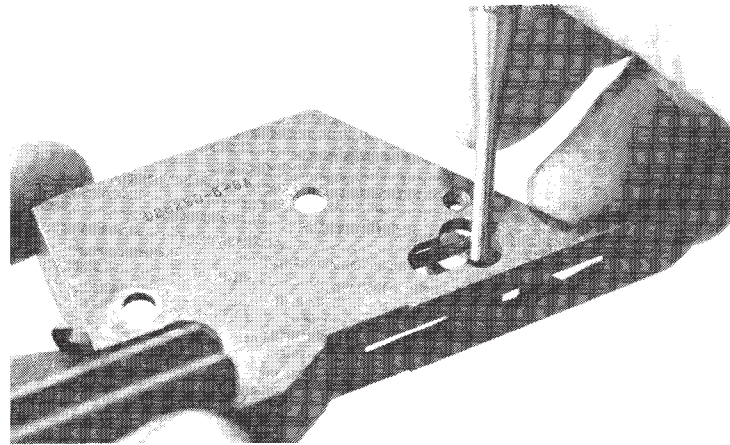


- 18.** Move the safety to the off-safe position, and tilt its upper arm toward the right, until its pivot post moves out of its hole in the housing, then remove it upward.
- 17.** Move the trigger guard toward the rear. Move the hammer toward the rear, then remove it upward and toward the right.



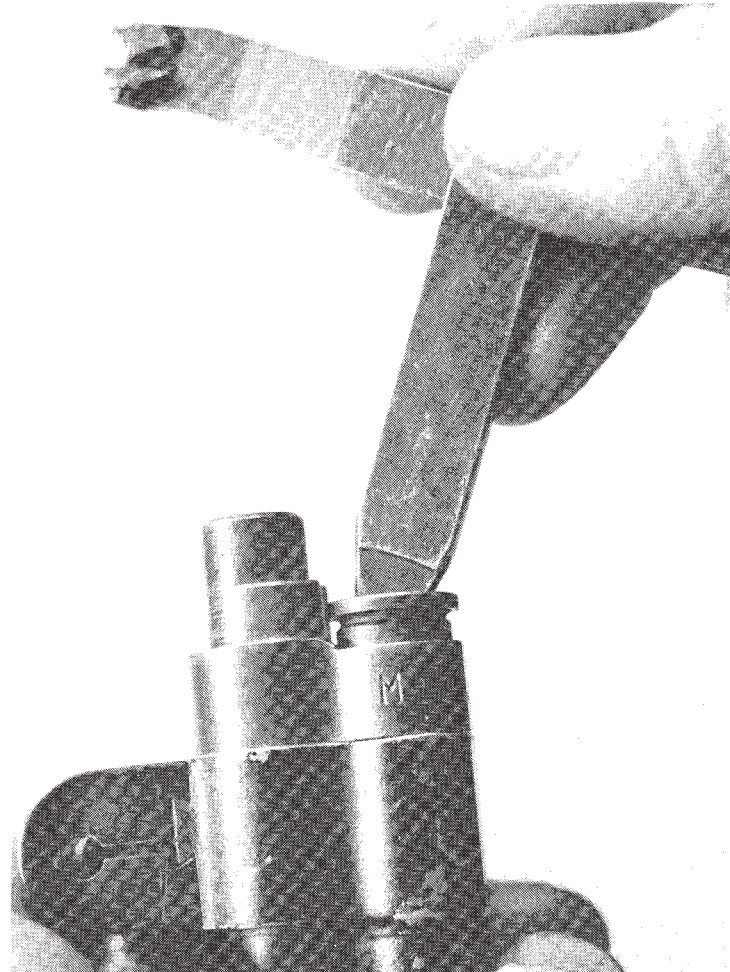
- 19.** Move the trigger guard toward the rear until its right upper arm is aligned with the open space in the housing, and tilt the right arm inward (toward the left), removing the guard downward and toward the right.

- 20.** Use a drift punch to tap the clip ejector spring off its post, working through the access hole in the left wall of the trigger group. The spring can also be simply pried off the post from inside, using a screwdriver blade.

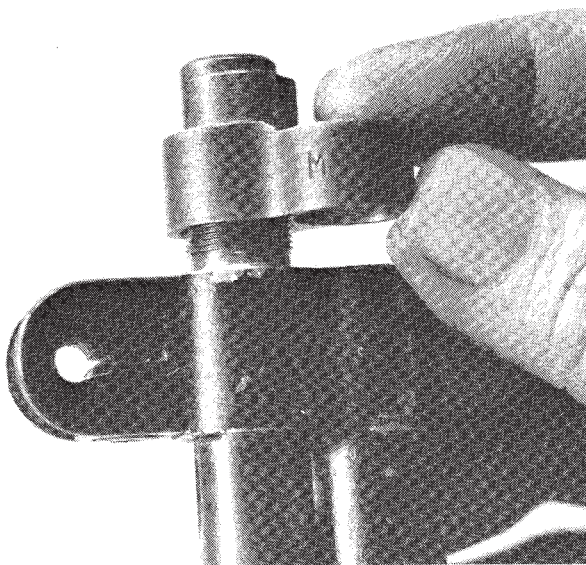


- 21.** Use a drift punch to start the clip latch pin out toward the front, until its larger front tip can be grasped or pushed with a screwdriver blade, and pull the pin toward the front and out. The latch and its spring are then taken off toward the left.

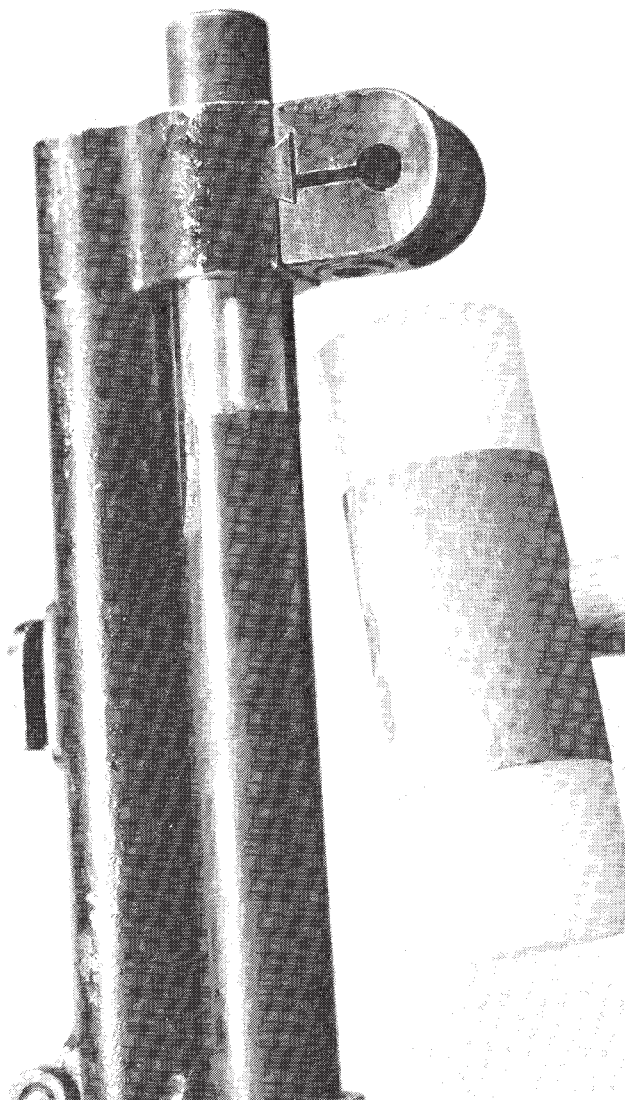
- 22.** Unscrew the gas piston nut, located below the barrel at the muzzle, and remove it.



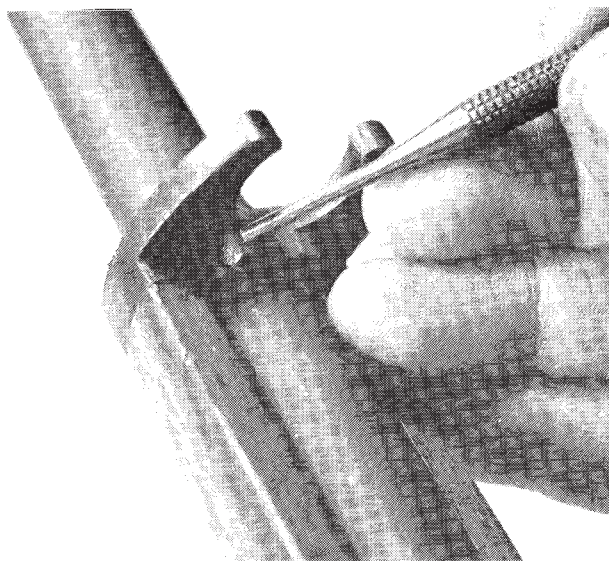
- 23.** Unscrew the gas cylinder lock, and take it off toward the front.



- 24.** Slide the gas cylinder off toward the front. If it is very tight, tap it with a plastic hammer to free it.

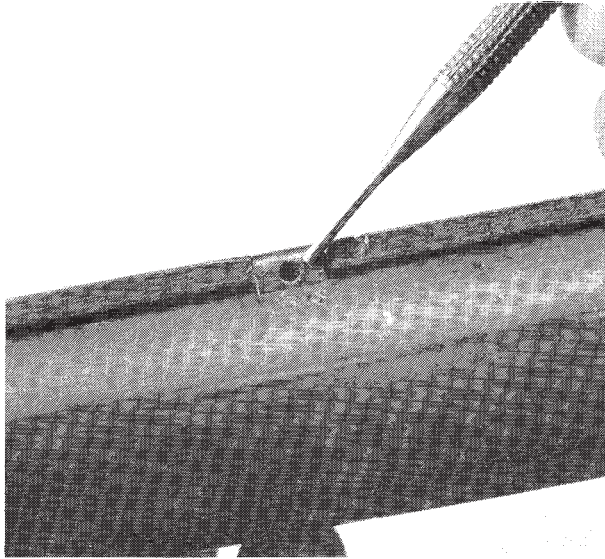


- 25.** Remove the front handguard wood toward the front. Drift out the cross pin in the underside of the rear band, and remove the band toward the front.

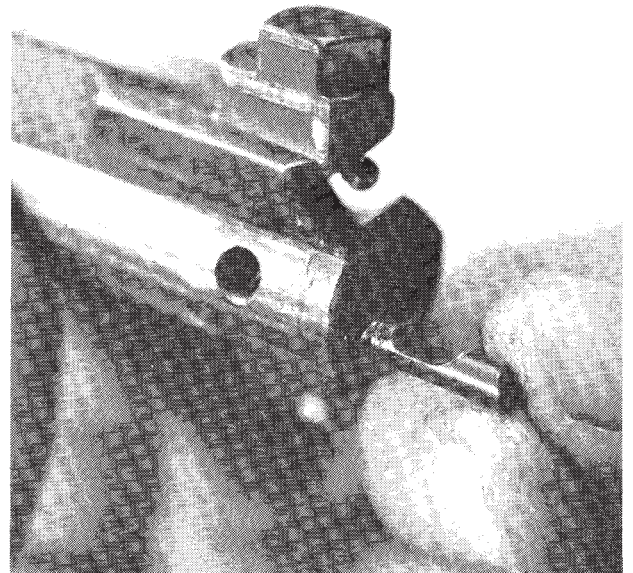


Reassembly Tips:

- 26.** Snap the rear upper handguard band out of its grooves in the barrel, and remove the handguard.



- 1.** When replacing the ejector and its spring, be sure the recess on the ejector is properly oriented for engagement with the extractor post. When replacing the extractor, press the front face of the bolt against a hard surface to keep the ejector depressed while inserting the extractor. The extractor has a camming surface beside the plunger, and can just be snapped into place, without depressing the plunger manually.



When replacing the operating slide latch, be sure the hook at its rear engages the top of the inner projection of the clip latch.

When replacing the magazine follower arm, be sure its rear side studs enter the track on the underside of the follower before inserting the cross pin.

When attaching the follower rod hooks to the studs on the follower arm, depress the carrier slightly to allow them to snap into place.



U.S. Model 1903 Springfield

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the U.S. Model 1903 Springfield also apply to the following gun:

U.S. Model 1903A3 Springfield

Data: U.S. 1903 Springfield

Origin: United States

Manufacturer: Springfield Arsenal and
Rock Island Armory

Cartridges: 30-06 Springfield

Magazine capacity: 5 rounds

Overall length: 43.2 inches

Barrel length: 24 inches

Weight: 8.6 pounds

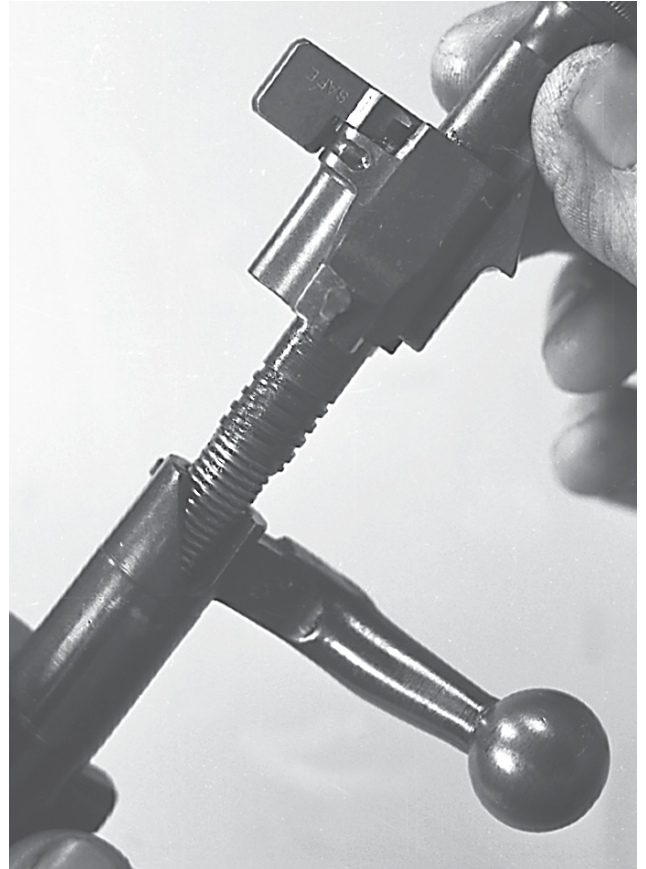
Adopted by the U.S. as military standard in 1903, this rifle replaced the Krag-Jorgensen and was used until the adoption of the M-1 Garand in 1936. Although officially replaced, the Springfield saw quite a bit of use during World War II. In 1942, the Remington Arms company did a slight redesign of the gun, mostly to make it easier to manufacture, and this rifle was designated the Model 1903A3. The main differences were in the use of the stamped-steel parts to replace several of the machined parts of the original gun, such as the magazine floorplate, and the rear sight was moved to the rear of the receiver. Mechanically, they are essentially the same.

Disassembly:

1. Cycle the bolt to cock the striker, and set the safety-lever in the vertical position. Set the magazine cut-off lever, located at the left rear of the receiver, at its mid-position, angled slightly upward from the horizontal. Remove the bolt toward the rear.



2. Depress the bolt sleeve lock (arrow), located on the left side, and unscrew the sleeve and striker assembly counter-clockwise (rear view). Remove the sleeve and striker assembly toward the rear, taking care not to trip the safety-lever.



3. Holding firmly to the sleeve and striker knob, turn the safety back to the off-safe position and allow the striker to move forward in the sleeve. Grip the serrated area on the retaining sleeve, just to the rear of the firing pin, and pull the sleeve toward the rear until it clears the back of the firing pin. Remove the firing pin toward the side. Caution: *Rest the striker knob on a firm surface during this operation, and keep a firm grip on the firing pin retaining sleeve, as the striker spring is quite strong.*

- 4.** Slowly release the spring tension, and remove the retaining sleeve and the spring toward the front.



- 5.** Slide the bolt sleeve off the striker rod toward the front.

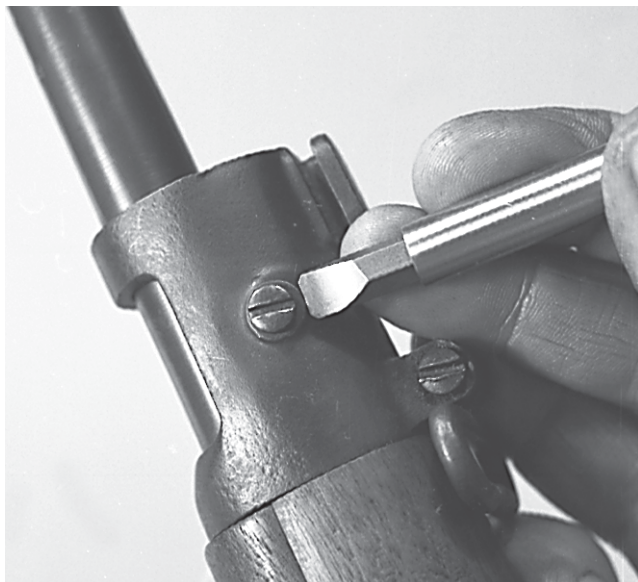


- 6.** Turn the safety-lever back to its mid-position and rest the lower rear edge of the bolt sleeve on a firm surface. Use a drift punch against the front tip of the safety shaft to drive it out toward the rear. Note that the safety plunger and spring will be released as the safety clears the rear of the bolt sleeve, so ease them out and take care that they are not lost.

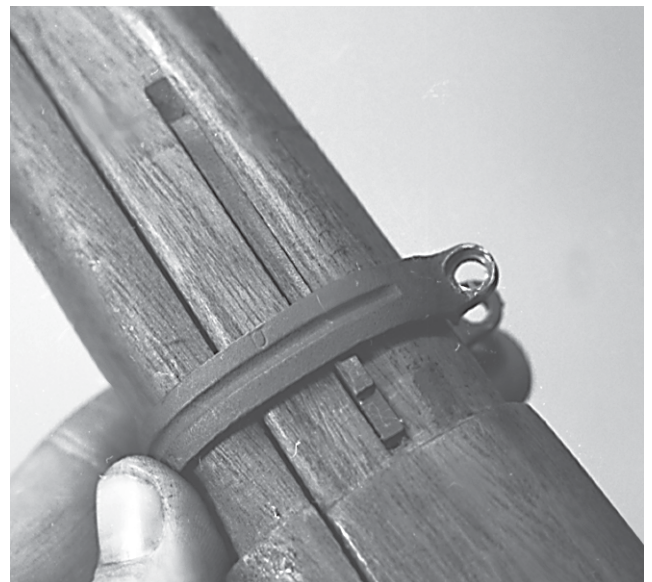
- 7.** Turn the extractor clockwise (rear view) until its front underlug is out of the groove at the front of the bolt, and is aligned with the ungrooved area on the bolt. Push the extractor forward and off its T-mount on the bolt ring.



- 8.** Insert a drift punch in the hole on the underside, just forward of the trigger guard, and depress the magazine floorplate latch. Move the floorplate toward the rear. Remove the floorplate and the attached spring and follower downward. The spring is easily detached from the floorplate and follower.

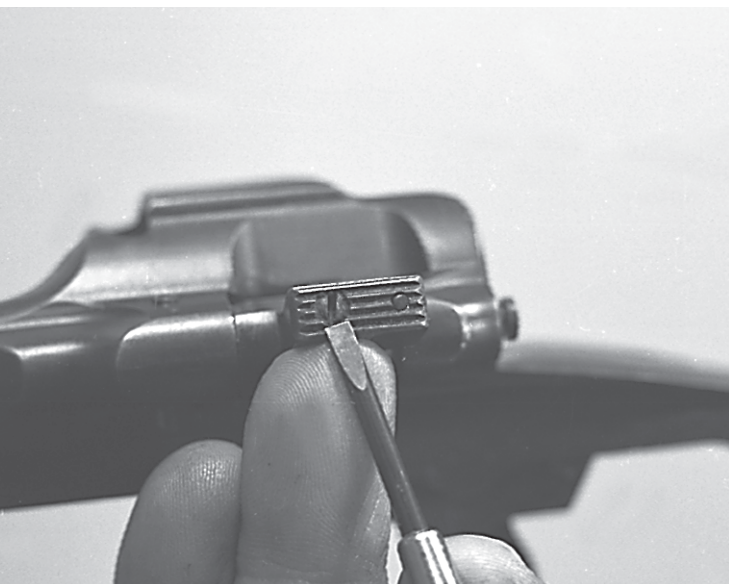


- 9.** Remove the cross screw in the front barrel band, and slide the barrel band forward.



- 10.** Depress the lock spring on the right side, in front of the rear barrel band (after the band screw and sling loop are removed), and slide the band off toward the front. Move the upper handguard wood forward, and take it off.

- 11.** Remove the large vertical screws on the underside at the front and rear of the magazine/trigger guard unit. Remove the action from the stock, and take off the trigger guard unit downward.

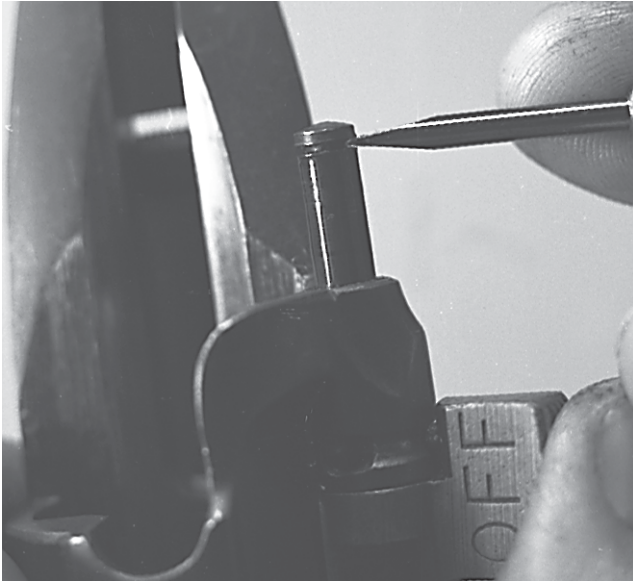


- 13.** Remove the small screw in the serrated end of the bolt stop/magazine cut-off lever.

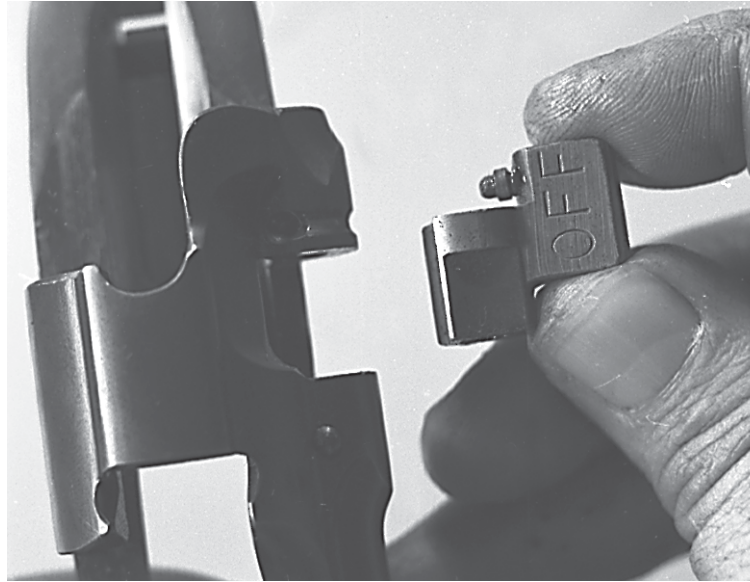
- 12.** The ejector is retained on the left side of the receiver by a vertical pin with a slotted screw-type head at its lower end. If the pin is unusually tight, using a screwdriver to turn it will help to loosen it, but for removal it is driven out downward. The ejector is taken out toward the inside of the receiver.



- 14.** The bolt stop pivot has a cannellure at its rear tip, allowing it to be pulled out with a fingernail or a screwdriver blade. When removing the pivot pin, keep slight inward pressure on the bolt stop, to relieve spring pressure on the pin.



- 15.** Remove the bolt stop/magazine cutoff toward the left, taking care not to lose the positioning plunger and its spring.

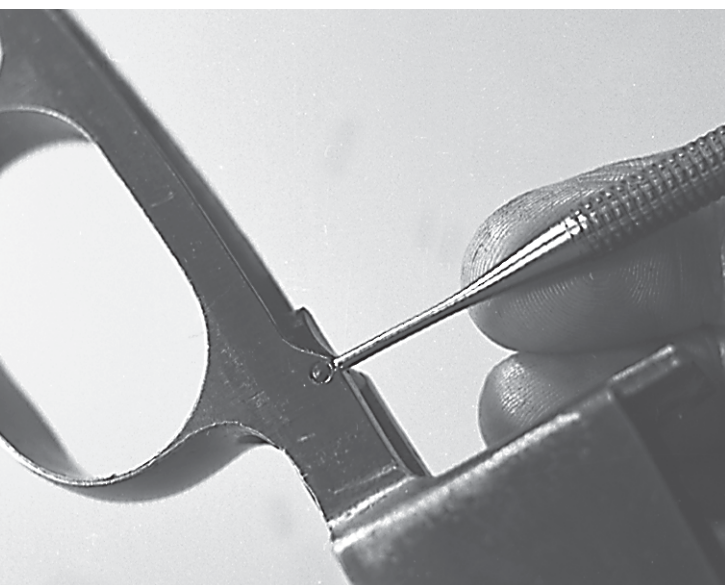
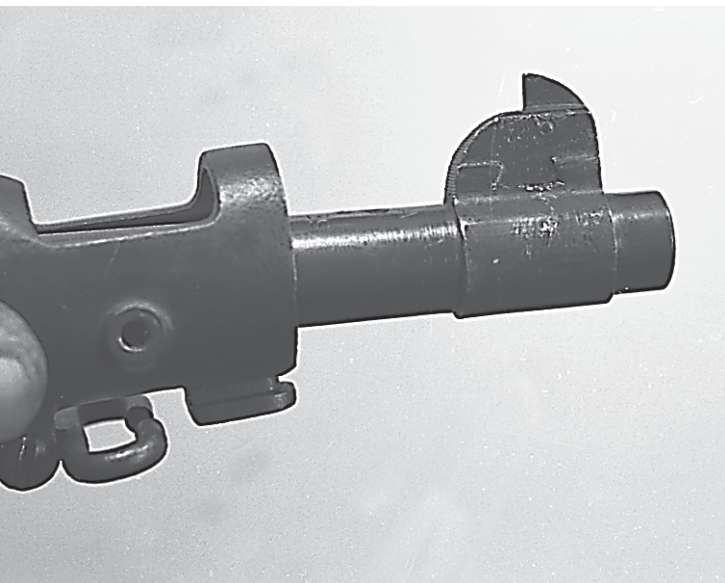


- 16.** Push out the sear pivot pin toward the left. As soon as its large head clears its recess in the underside of the receiver, exert slight pressure on the front of the sear to compress the spring and assist withdrawal of the pin.



- 17.** Remove the trigger, sear, and sear spring assembly downward. Drifting out the trigger cross pin will allow separation of the trigger from the sear.

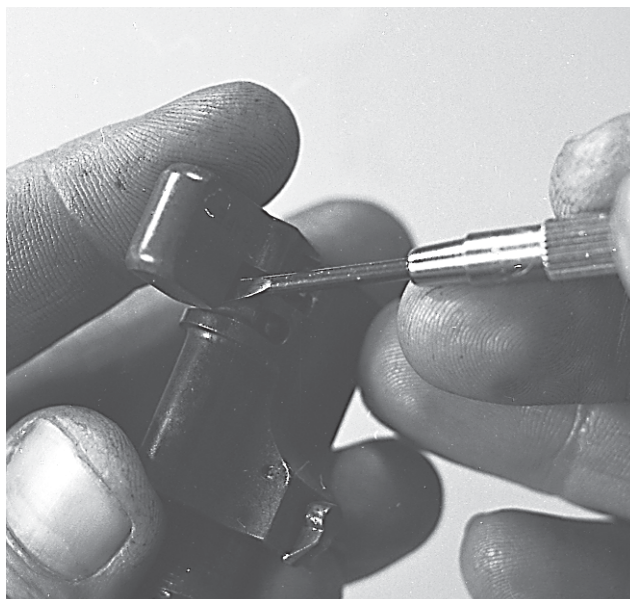
- 18.** To take the front barrel band completely off, the front sight must be drifted out of its dovetail to allow the band to pass. The front sight blade is retained in the dovetailed base by a cross pin.



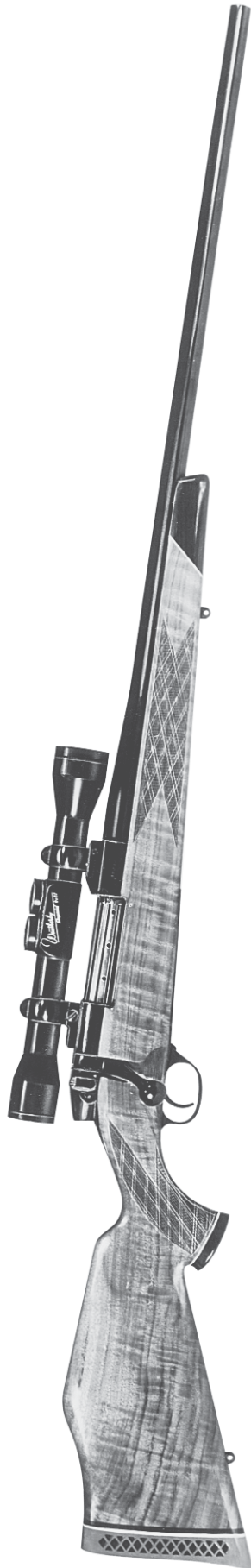
- 19.** Drifting out the cross pin in the trigger guard unit will allow removal of the magazine floorplate latch and its spring upward. The spring is quite strong. So control it and ease it out.

Reassembly Tips:

- 1.** When replacing the safety-lever in the bolt sleeve, insert a small screwdriver to depress the positioning plunger and spring, and note that the lever should be in its midway (vertical position for installation).



Before the bolt is replaced in the receiver, the striker must be in the cocked position, with the bolt handle raised. Since the Springfield has a cocking knob, this is easily done.



Weatherby Mark V

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Weatherby Mark V also apply to the following guns:

Weatherby Alaskan

Weatherby Fibermark

Weatherby Mark V Safari Grade

Weatherby Vanguard Classic I

Weatherby Vanguard VGX Deluxe

Weatherby Euromark

Weatherby Lazermark

Weatherby Mark V Ultramark

Weatherby Vanguard Classic II

Weatherby Vanguard Weatherguard

Data: Weatherby Mark V

Origin: United States

Manufacturer: Weatherby, South Gate,
California (actions imported,
some made by Sauer)

Cartridge: A long list of standard and
Weatherby Magnum
calibers

Magazine capacity: 2 to 5 rounds

Overall length: 43-1/4 to 46-1/2 inches

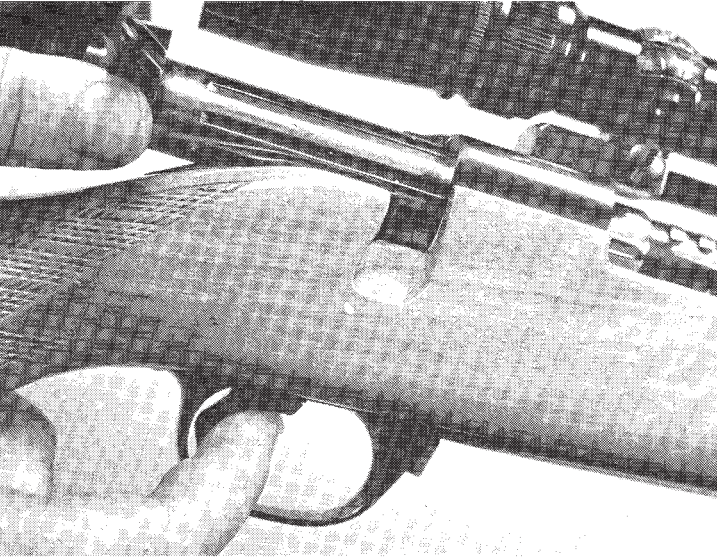
Barrel length: 24 or 26 inches

Weight: 6-1/2 to 10-1/2 pounds

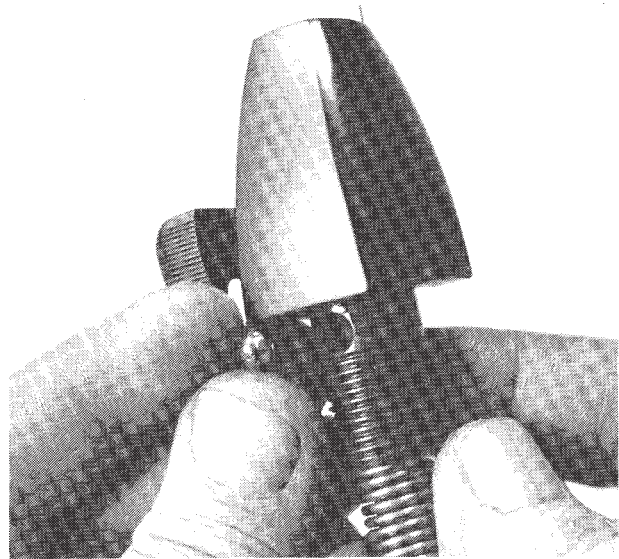
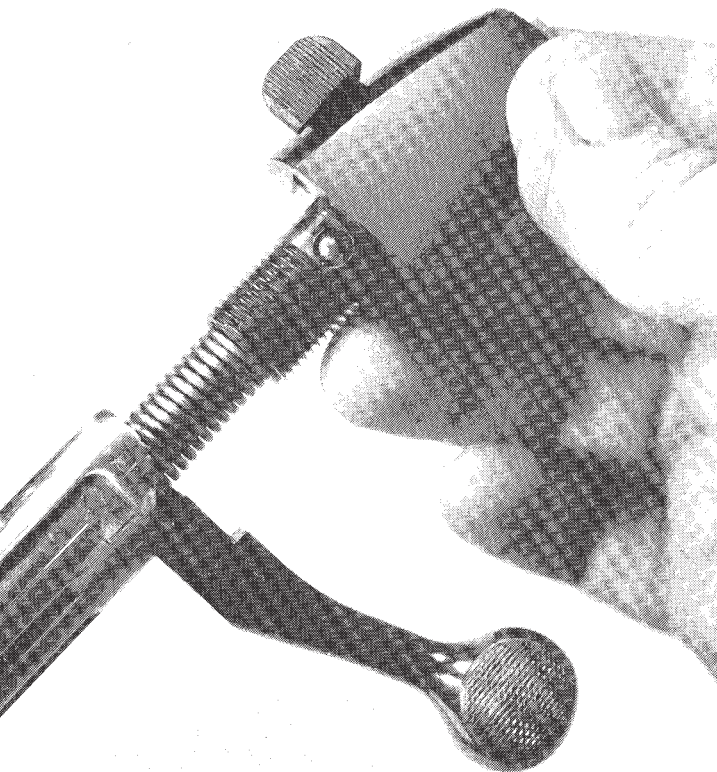
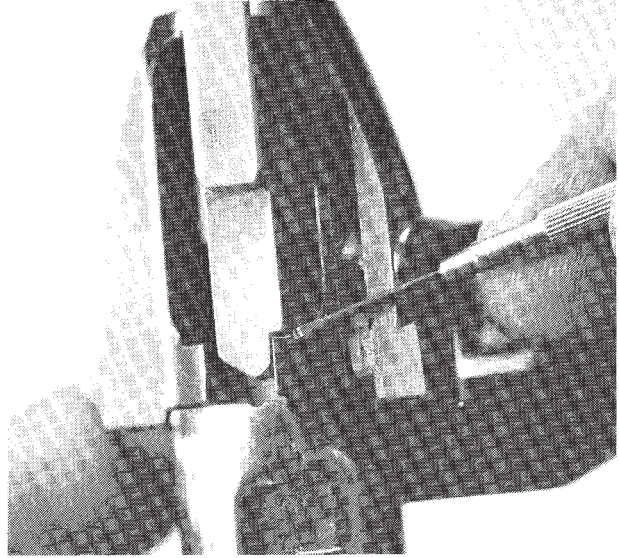
From the first Weatherby rifle in 1948 to the present time, the guns of the late Roy Weatherby have established a standard of excellence that is rivalled only by the more expensive custom rifles. The Mark V, first offered in 1955, is still in production. In 1970 a lower-priced version, the Vanguard, was introduced, and it shares many of the mechanical features of the Mark V. These instructions will generally apply to the Vanguard rifle as well.

Disassembly:

1. Open the bolt, hold the trigger pulled to the rear, and remove the bolt from the rear of the receiver.

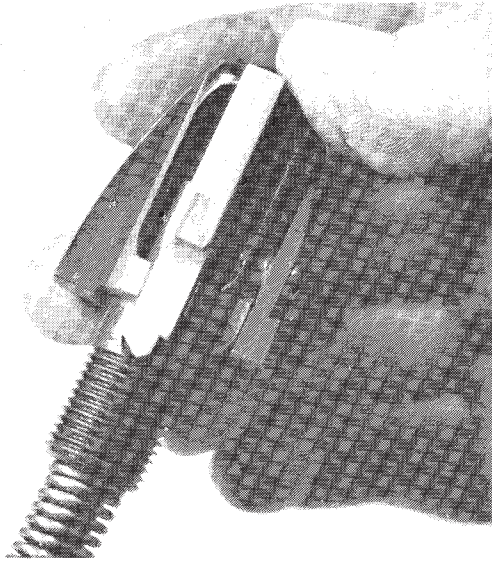


2. Grip the underlug of the cocking piece firmly with smooth-jawed non-marring pliers, and move the cocking piece toward the rear until it can be turned to engage its front step on the inside of the bolt sleeve. This will lock the striker in rear position, as shown.

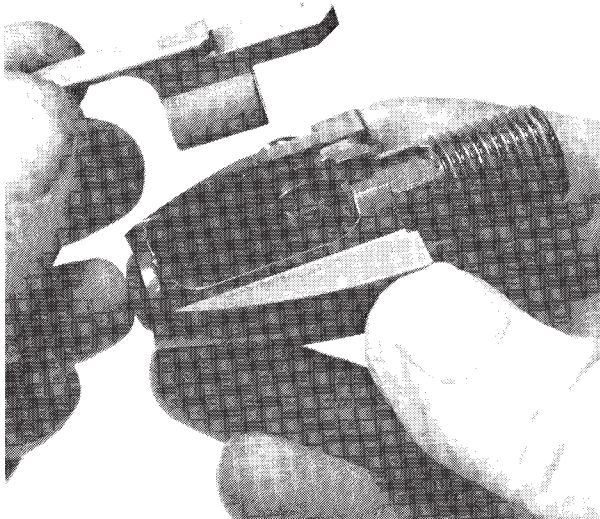
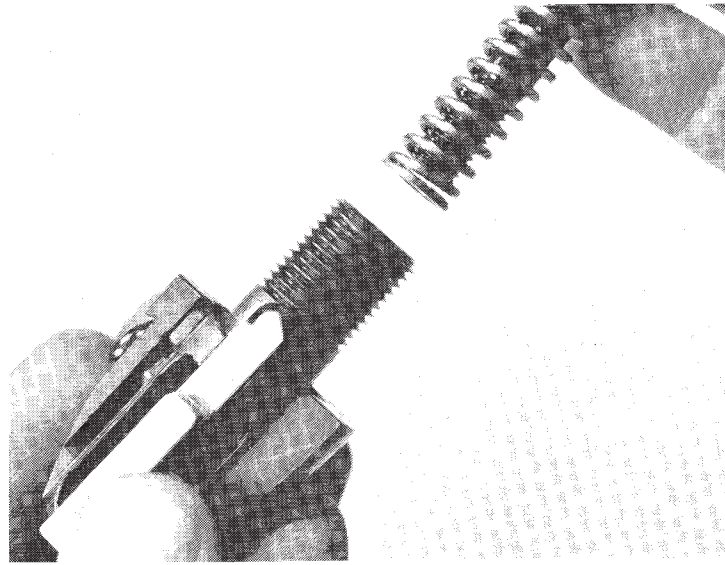


4. Remove the lock ball from its well on top of the bolt sleeve neck, and take care that it isn't lost.
3. Unscrew the bolt from the sleeve and striker assembly and remove it toward the front. Keep the sleeve in the upright position during this operation, as the firing pin lock ball will be freed from its hole at the front of the sleeve as soon as it clears the rear of the bolt.

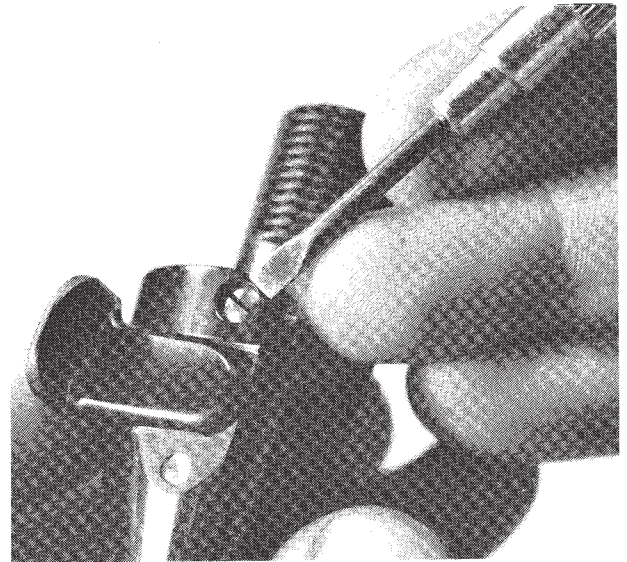
- 5.** Turn the cocking piece out of its lock step inside the bolt sleeve, and allow it to move forward into its recess on the underside of the sleeve.



- 6.** Note that the base of the firing pin at the front of the striker shaft (not shown) has flat sides. Grip the bolt sleeve firmly, and by hand or with parallel-jaw pliers unscrew the striker shaft from the cocking piece. Keep front-ward pressure on the sleeve, as the striker spring is partially compressed. Ease the spring tension slowly, and remove the striker and spring toward the front.

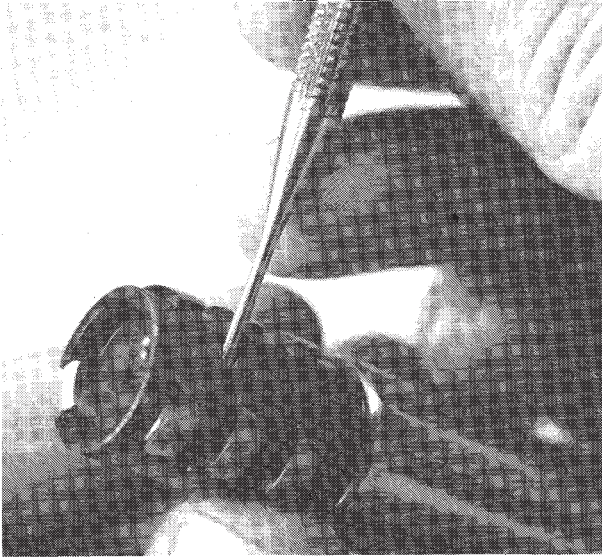


- 7.** Remove the cocking piece from the bolt sleeve.

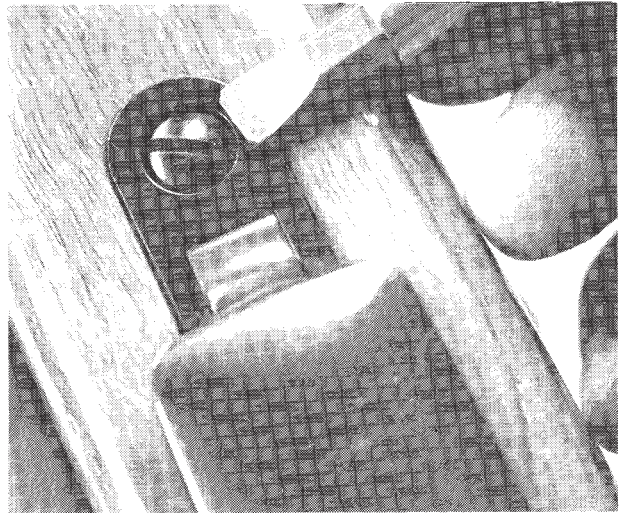
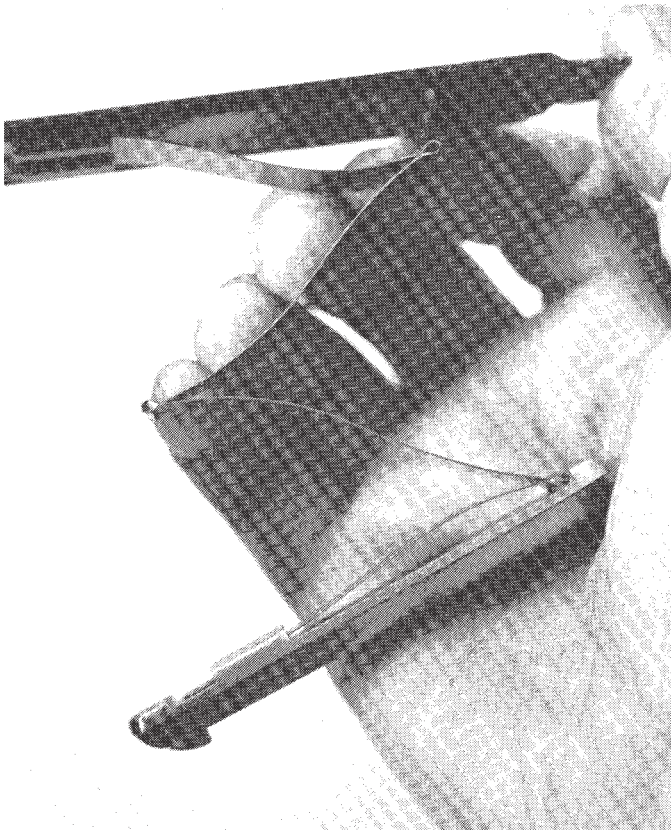
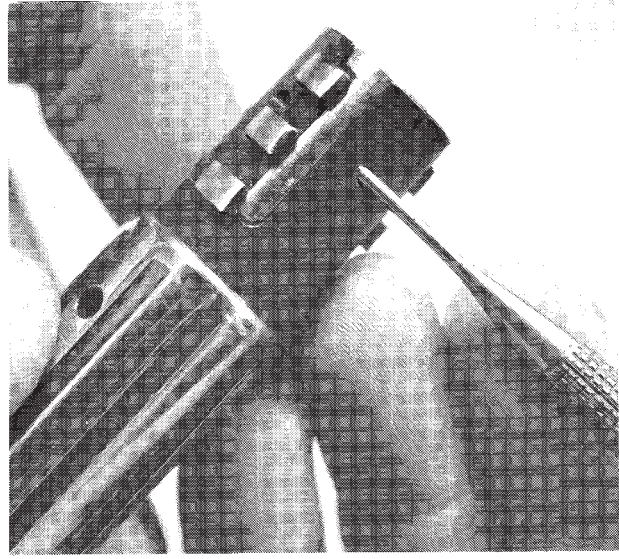


- 8.** The safety is retained in the bolt sleeve by its positioning lever and spring, and the lever is held by a screw on the right side. Remove the screw, and take out the lever and spring toward the front. The safety is then removed toward the right.

9. The ejector is retained by a cross pin at the front of the bolt. **Caution:** *The ejector spring is under tension. Control the ejector and ease it out toward the front.*

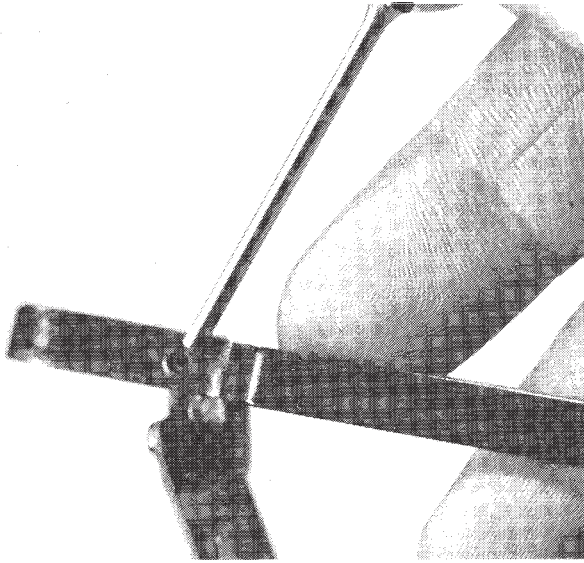


10. The extractor is also retained by a cross pin on the right side at the front of the bolt. Drifting out the pin will free the extractor and its coil spring for removal.

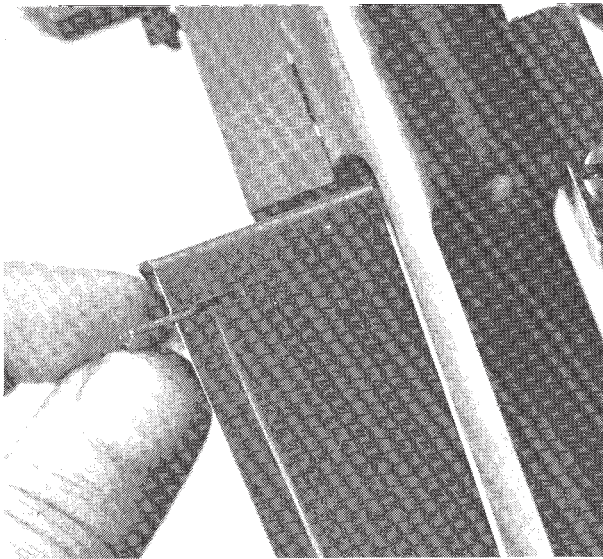
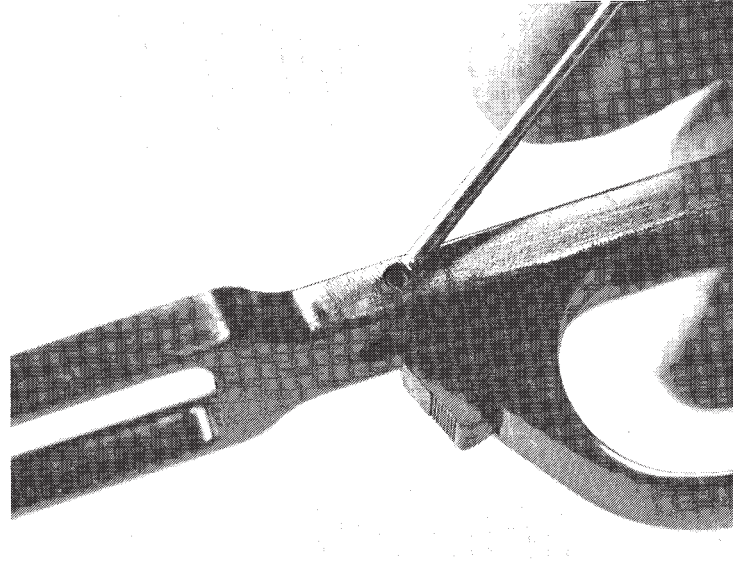


12. Close the floorplate, and remove the large vertical screw at the front of the magazine plate. Remove the large vertical screw at the rear of the trigger guard, and take off the trigger guard assembly downward. Separate the action from the stock.
11. Operate the latch and open the magazine floorplate. Slide the magazine spring out of its slot inside the floorplate. The follower is separated from the spring in the same way.

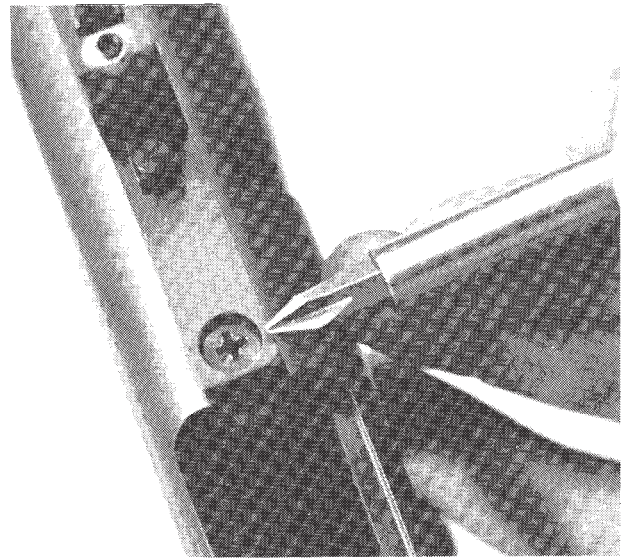
- 13.** Drifting out the cross pin will allow the magazine floorplate to be removed.



- 14.** Drifting out the roll pin that retains the floorplate latch will allow removal of the latch and its spring downward and toward the front.

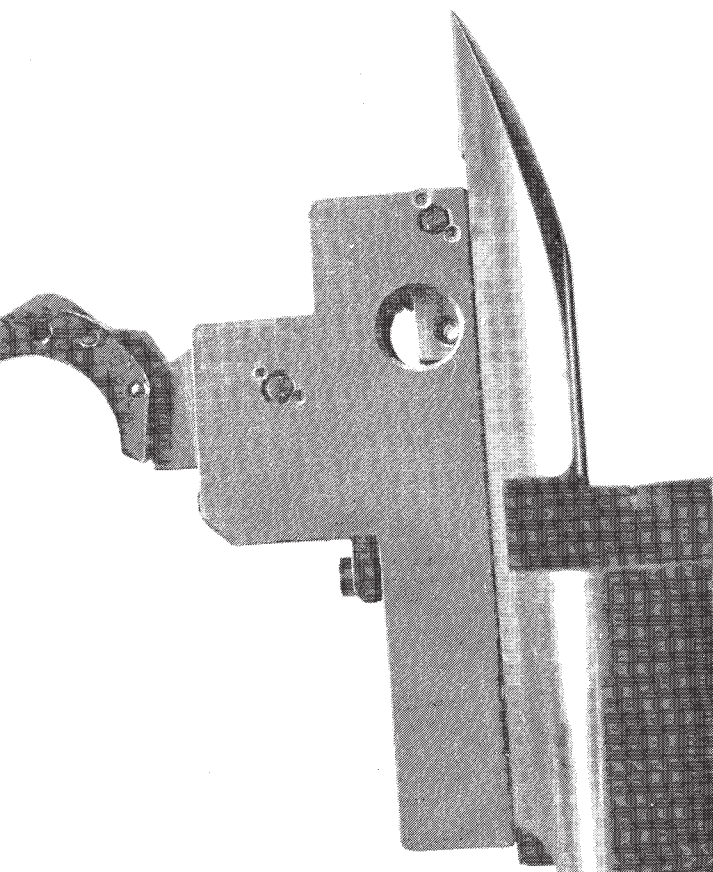


- 15.** When the action is taken out of the stock, the magazine box will be released for removal. Note that there is a spacer plate (in some calibers) at the rear of the box, and take care that it isn't overlooked and lost.

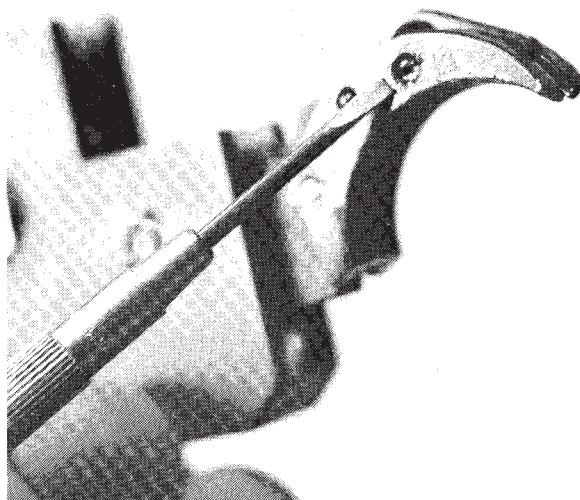


- 16.** On earlier guns, the trigger housing is retained by a post and cross pin. On the late model shown, two Phillips-head screws hold the housing to the underside of the receiver. One screw enters from below, at the front of the housing, and the other enters from above, located in the floor of the bolt track at the rear. Taking out these screws will allow removal of the housing downward, but this will not be necessary in normal disassembly.

- 17.** Early Mark V rifles had a trigger housing with a removable sideplate. Note that on this late gun, the housing is a one-piece casting, and the trigger and sear cross pins are heavily staked in place to discourage disassembly. If necessary, the pins can be removed. The trigger is taken out toward the rear and downward, the sear upward, and the bolt stop upward (after removal of the trigger). Unless something needs repair, it's best to leave these parts in place.

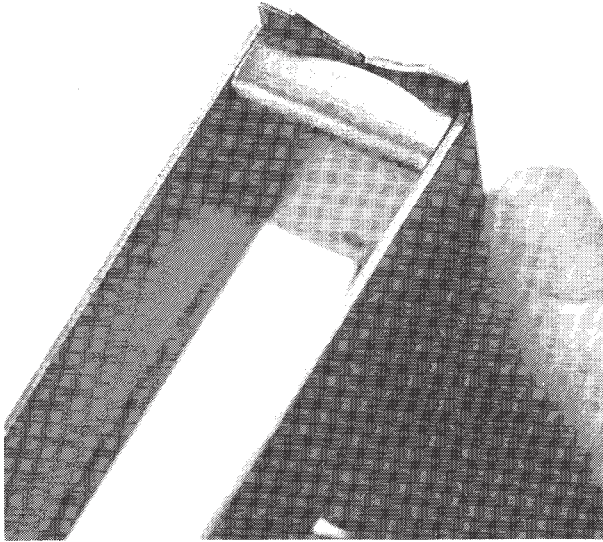


- 18.** The angle of the trigger "shoe" on its lower extension is adjustable by means of a tiny screw on the left side. The shoe can be removed by drifting out its cross pin.

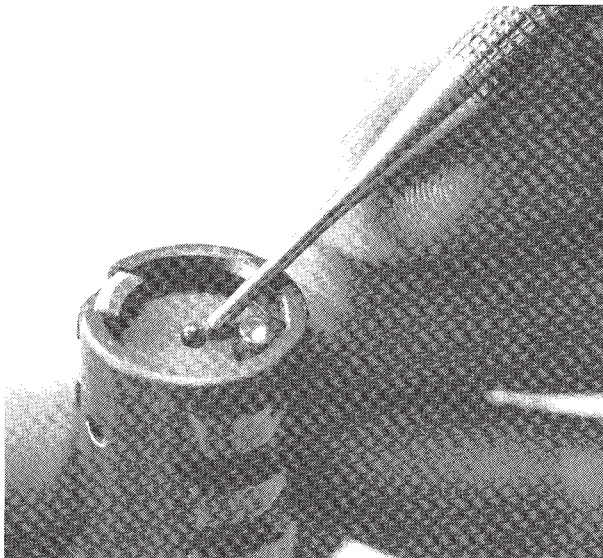
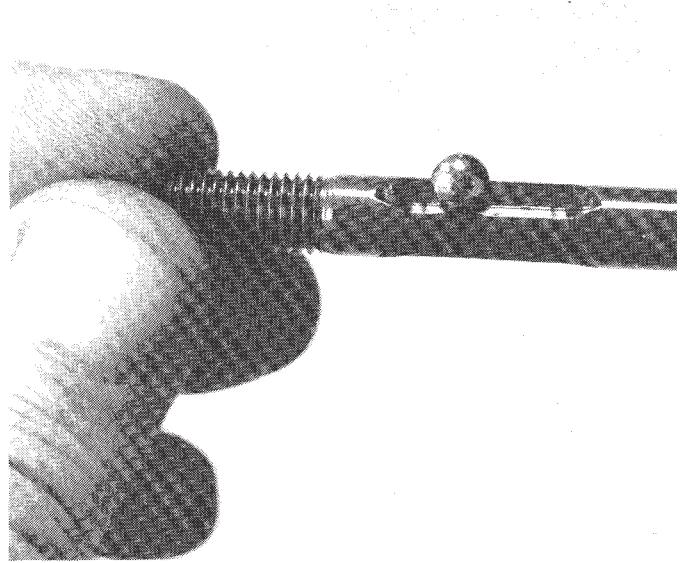


Reassembly Tips:

1. When replacing the magazine box, in those calibers which have a spacer plate at the rear, note that the plate is inserted from below, with its "shelf" turned toward the rear, to seal off the excess space.



2. When replacing the striker, turning its threaded rear back into the cocking piece, note that the striker shaft has recesses on its side which align with the lock ball in the neck of the sleeve. Also, note that the depth to which the shaft is turned controls the degree of protrusion of the firing pin point at the bolt face.



3. When the striker and bolt sleeve system is fully assembled and installed in the bolt, let the striker move forward to the fired position, and check the degree of firing pin point protrusion at the bolt face. If it is more than the one shown, it must be adjusted. Note that the striker must be recocked before the bolt is put back into the receiver.



Winchester Model 70

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Winchester Model 70 also apply to the following guns:

Winchester Model 70 Featherweight

Winchester Model 70 Lightweight Carbine

Winchester Model 70 Mannlicher

Winchester Model 70 Super Express

Winchester Model 70 Win-Tuff Featherweight, Lightweight

Winchester Model 70A

Winchester Model 670 Carbine

Winchester Ranger

Winchester Model 70 H.B. Varmint

Winchester Model 70 Lightweight Rifle

Winchester Model 70 Sporter

Winchester Model 70 Winlite

Winchester Model 670

Winchester Model 770

Data: Winchester Model 70

Origin: United States

Manufacturer: Winchester Repeating
Arms New Haven,
Connecticut

Cartridges: From 222 to 458,
including several
magnum rounds

Magazine capacity: Varies with cartridges

Overall length: 42-1/2 to 44-1/2 inches

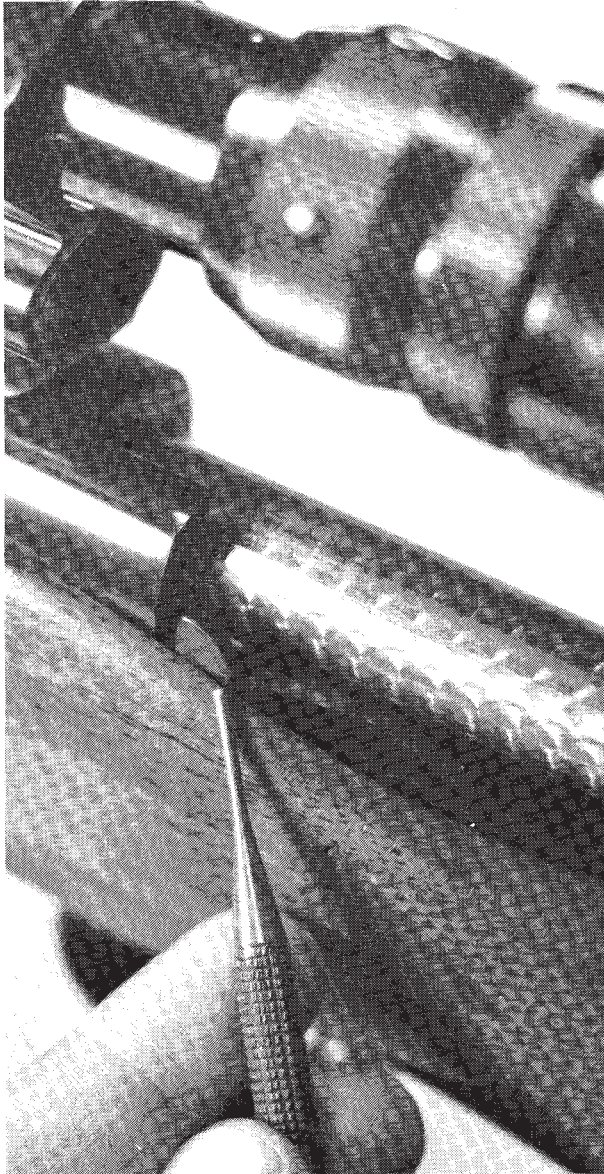
Barrel length: 22 and 24 inches

Weight: About 7-1/2 pounds

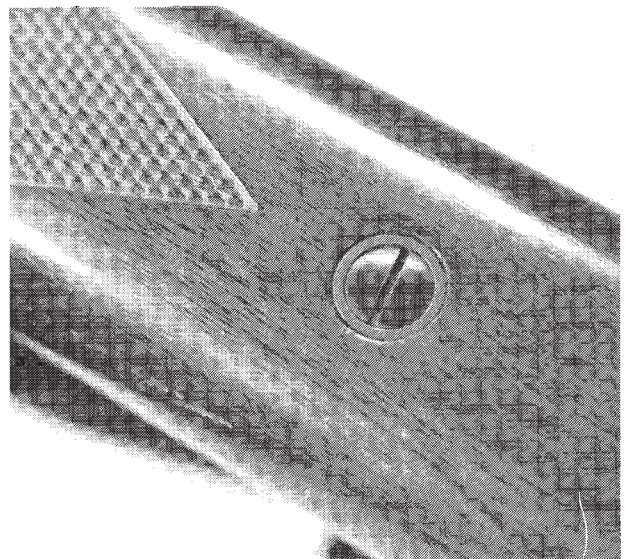
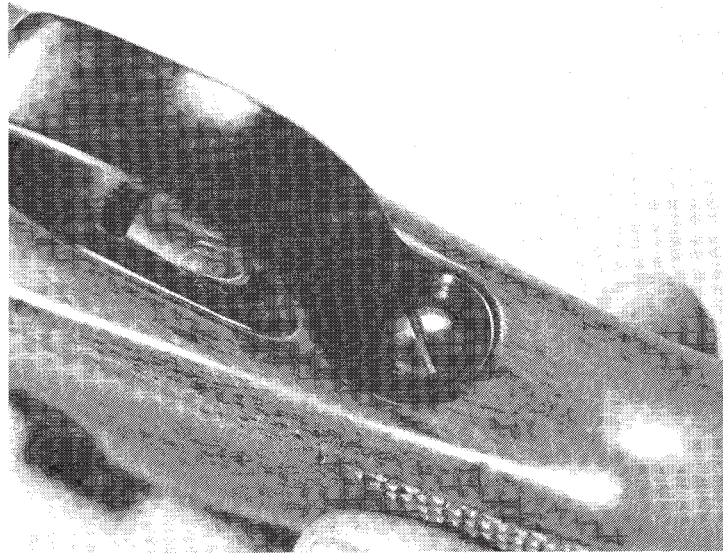
The original Model 70 first appeared in 1936, and was made until 1963. An “economy” version was made between 1964 and 1972, and since that time the original quality was resumed, with some of the innovations of the 1964 version retained. Collectors, and some shooters, treasure the pre-1964 “originals,” but in some ways, the later guns, as now currently made, are mechanically superior. A list of the calibers and model variations of the Model 70 would nearly fill an entire page. the gun covered here is a late standard model. On the pre-1964 guns, the bolt detail is quite similar to the standard Mauser pattern. As many readers will be aware, the Model 70 is now made under license by the U.S. Repeating Arms Co.

Disassembly:

1. To remove the bolt, the safety must be in the off-safe position. Open the bolt, and depress the bolt stop, located at the left rear of the receiver. Hold it down, and withdraw the bolt toward the rear. For clarity, the bolt stop is indicated with a drift punch in the photo. It is depressed with a fingertip.

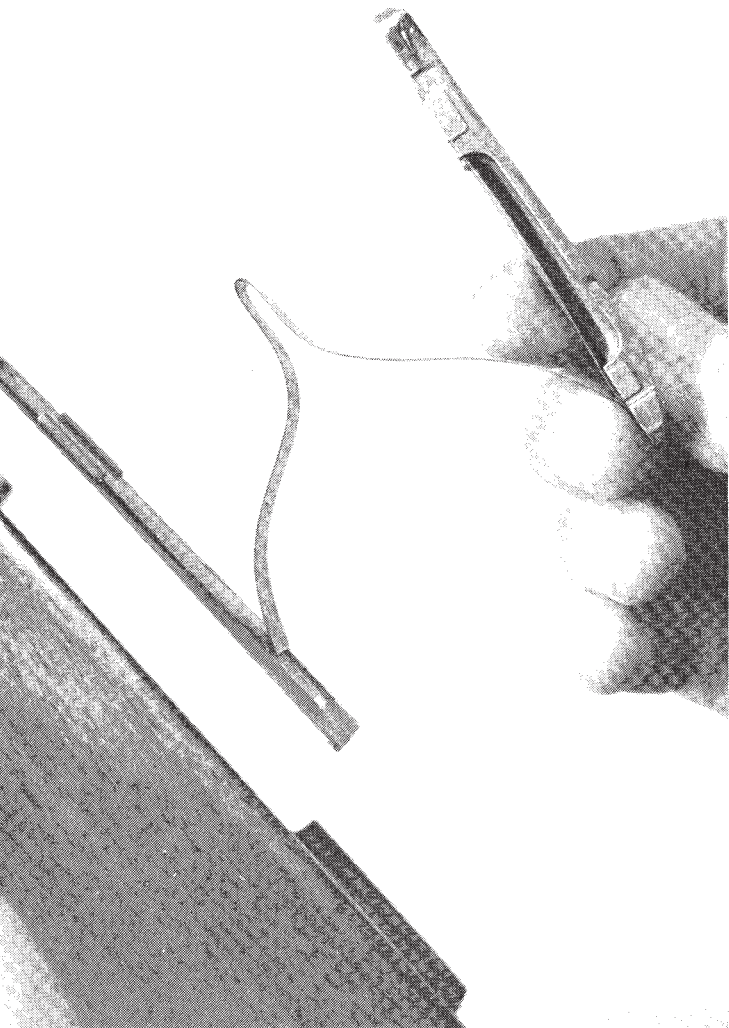


2. Remove the screws on the underside at the front and rear of the trigger guard. Note that on some Model 70 guns the magazine is a through-type, with a hinged cover plate. The one shown in the photos is a closed (blind) type, with a solid stock underside. After the guard screws are removed, the guard can be taken off downward.

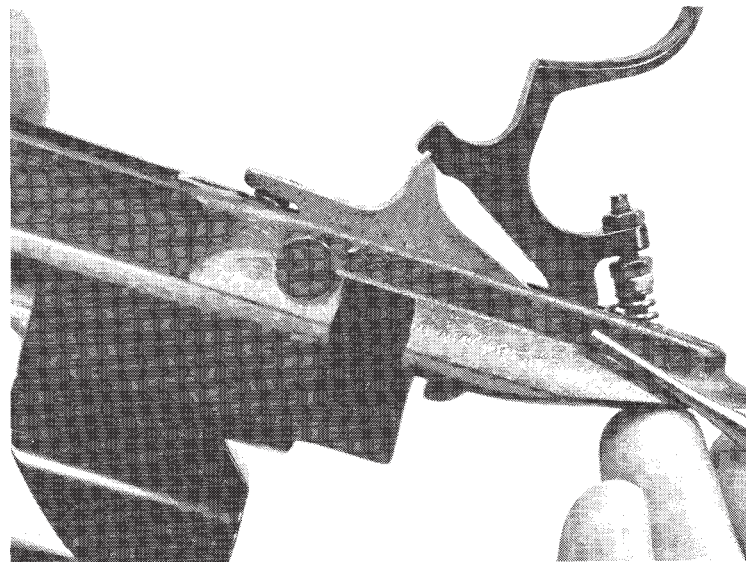
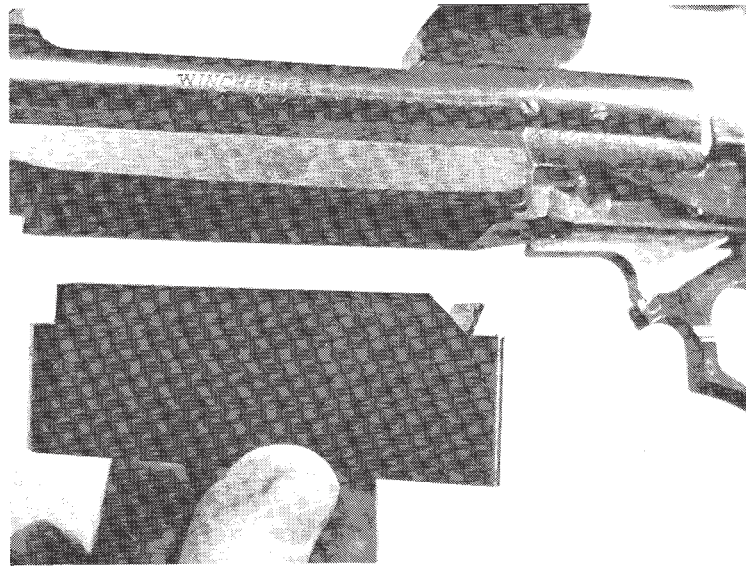


3. Remove the main stock mounting screw, on the underside below the chamber area. If the gun is a through-magazine type, this screw will be in the forward base of the magazine floorplate. When all three screws are removed, the action can be taken out of the stock.

4. If the gun is a blind magazine type, the magazine follower, spring, and internal floorplate can be taken out upward. If the gun has an external floorplate, the floorplate and front hinge plate can be taken off downward. The plate is attached to its base with a cross pin. A cross pin also retains the floorplate catch and its spring in the front of the trigger guard.

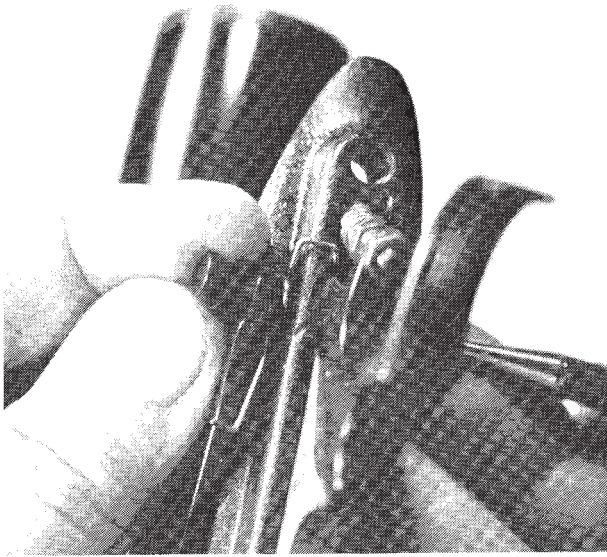


5. The magazine box, or housing, is usually a tight press fit on the bottom of the receiver, and can be removed by exerting downward pressure while working it gently from side to side.

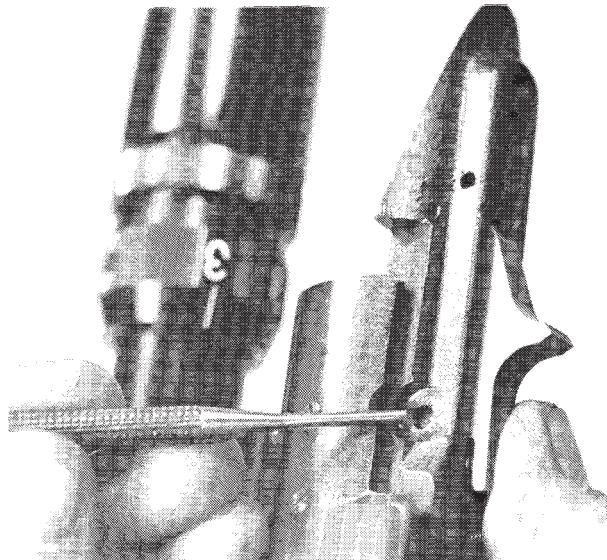
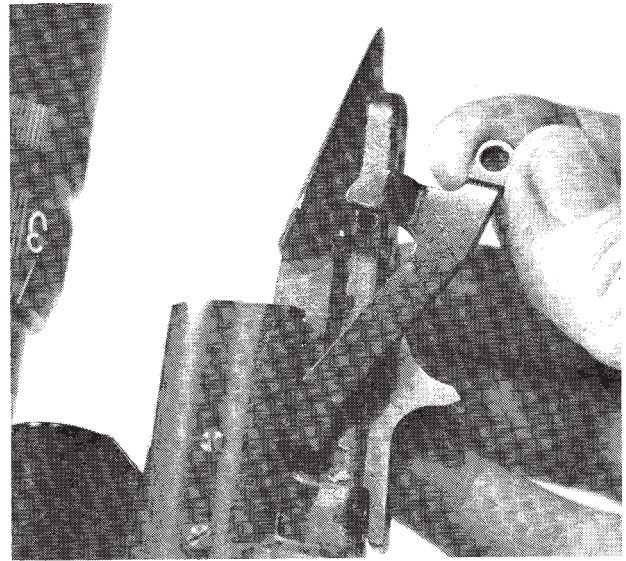


6. A cross pin retains the trigger assembly on the underside of the receiver. Note that the trigger, its spring, and adjustment system can be removed downward without disturbing the adjustment. The cross pin must be drifted out toward the left.

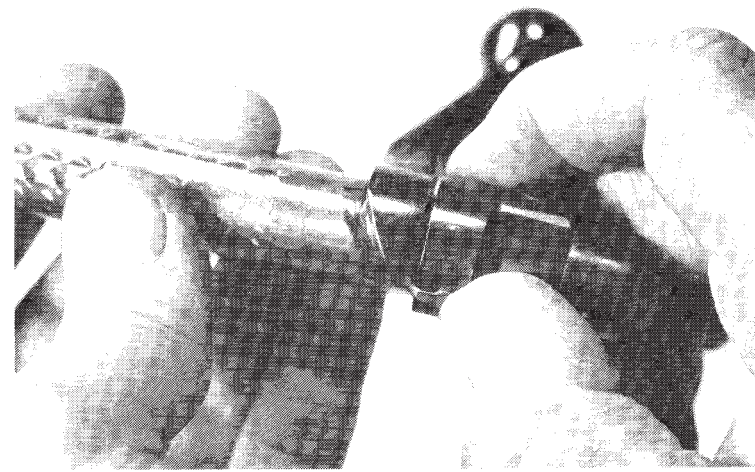
- 7.** Note that the trigger pin has an enlarged head on the left side, and is also the pivot and retainer for the bolt stop and its spring. Before removal, note the relationship of the bolt stop, its spring, and the trigger, to aid reassembly. Restrain the spring as the pin is drifted out, and ease it off.



- 8.** The bolt stop is moved downward and toward the rear for removal.



- 9.** The sear is retained on the underside of the receiver by a cross pin which must be drifted out toward the right. Restrain the sear against the tension of its strong spring, and remove the sear and spring downward.

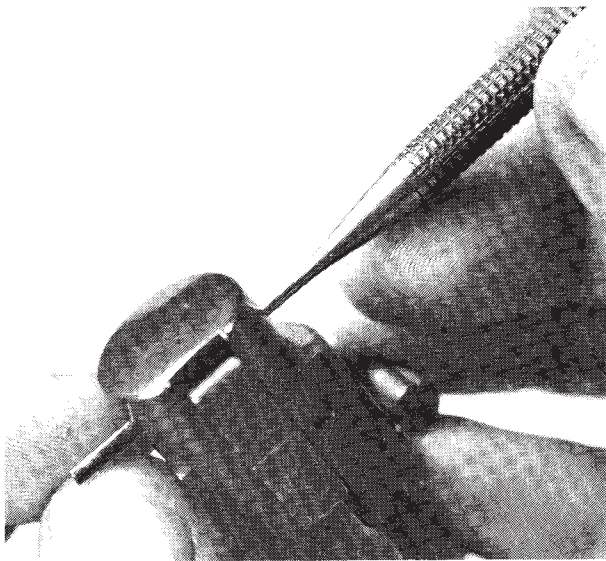


- 10.** Grip the lower lug of the cocking piece firmly in a vise, and move the bolt forward until the safety can be turned back to the safe position. Depress the bolt sleeve lock plunger, located on the left side of the bolt, and unscrew the rear section, the bolt sleeve. During this operation, take care that the safety is not tripped to the fire position.

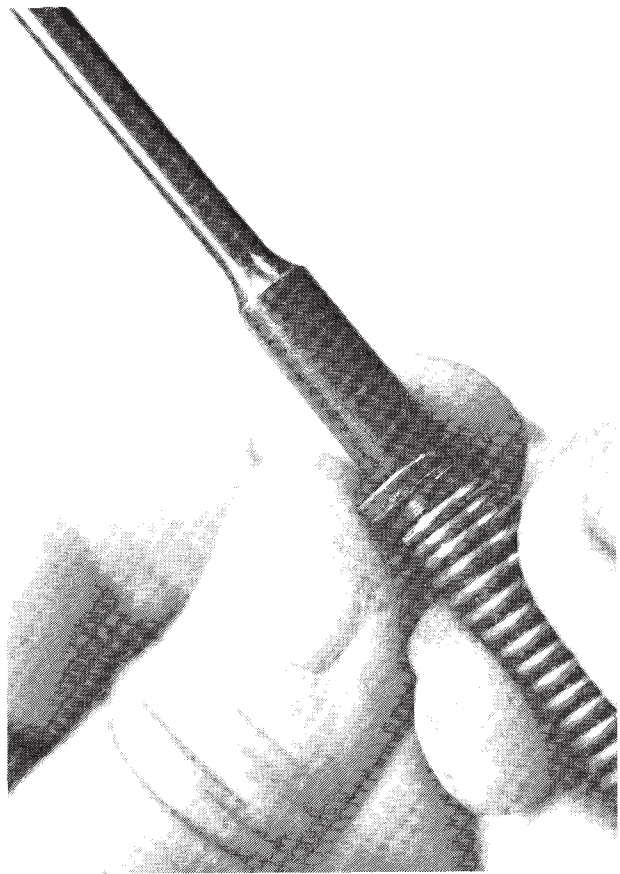


11. When the sleeve and striker assembly has cleared its internal threads, withdraw it toward the rear.

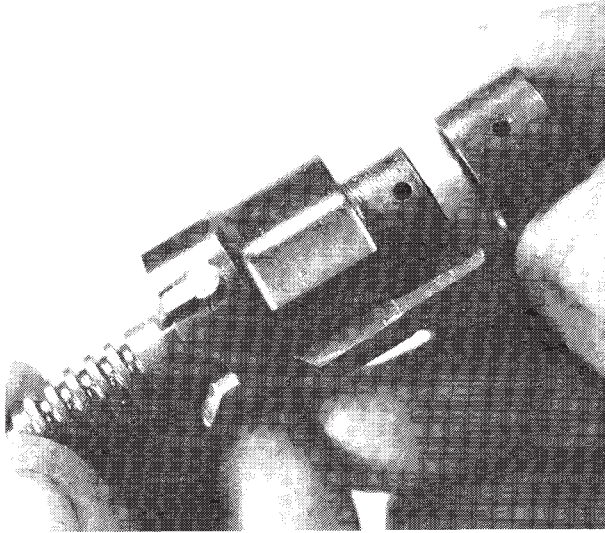
12. Grip the forward portion of the striker firmly in a vise, with the spring retaining C-clip and compression washer just above the vise jaws. Pry the compression washer upward, remove the C-clip, and allow the washer and spring to come down on the vise. With a firm hold on the bolt sleeve, open the vise, and slowly ease the assembly upward, releasing the tension of the spring. Take care not to lose the compression washer. If the gun is an older one, spring removal is done by simply pulling the firing pin sleeve slightly toward the rear, giving it a quarter-turn in either direction, and easing it off toward the front. After the tension is relieved, take off the spring toward the front.



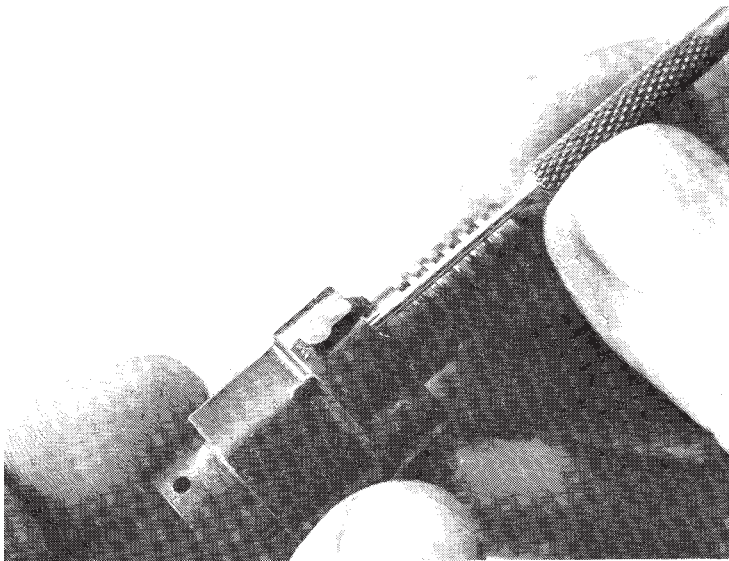
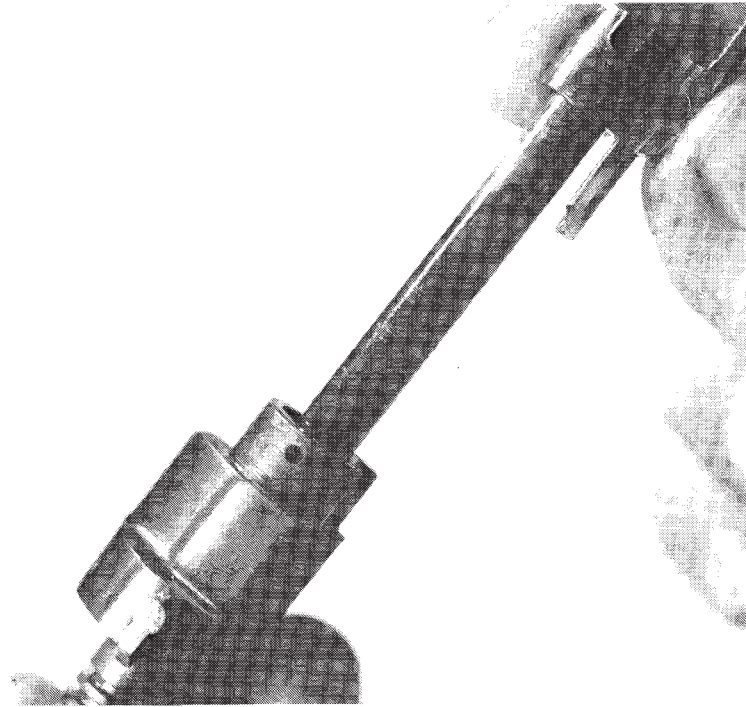
13. Drift out the cross pin in the bolt end piece, at rear of the bolt sleeve.



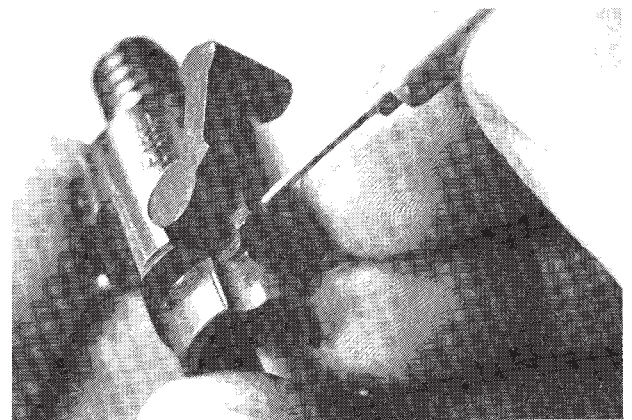
- 14.** Remove the bolt end piece toward the rear. If it is tight, it can be tapped off by sliding the striker assembly against it.



- 15.** Remove the striker assembly from the rear of the bolt sleeve.

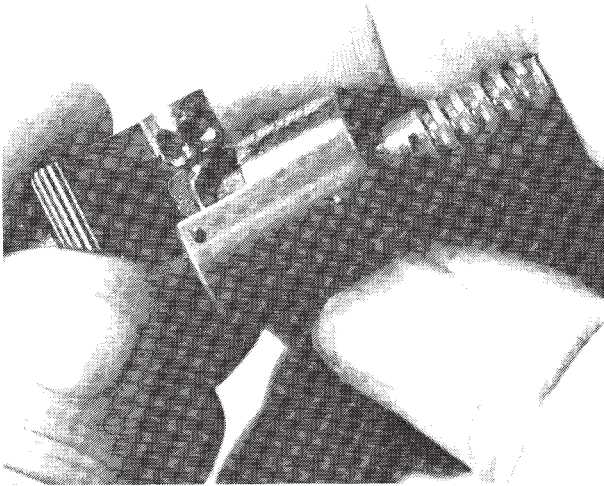


- 16.** To remove the bolt sleeve lock plunger and spring, push out the retaining pin, which runs lengthwise in the sleeve, and take off the plunger and spring toward the side.

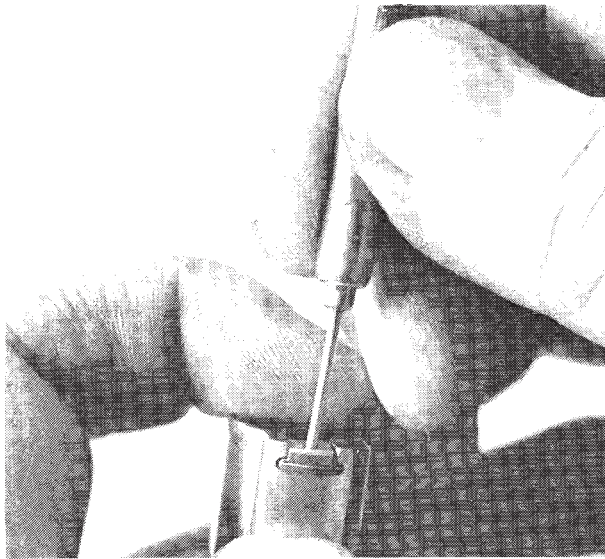
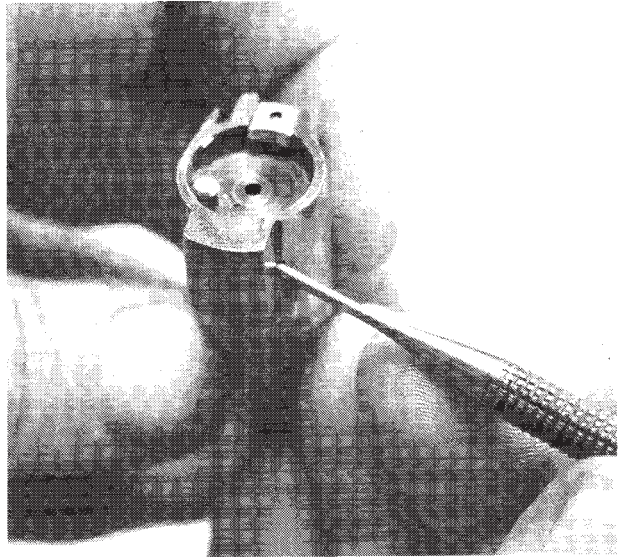


- 17.** Use a very small drift punch to push the small pin beside the safety inward, into the interior of the bolt sleeve. The safety-lever should be in the off-safe position.

- 18.** Turn the safety around toward the rear, then move it upward and out of the bolt sleeve. **Caution:** The safety positioning spring and plunger will be released as the safety clears the sleeve, so restrain them and ease them out.



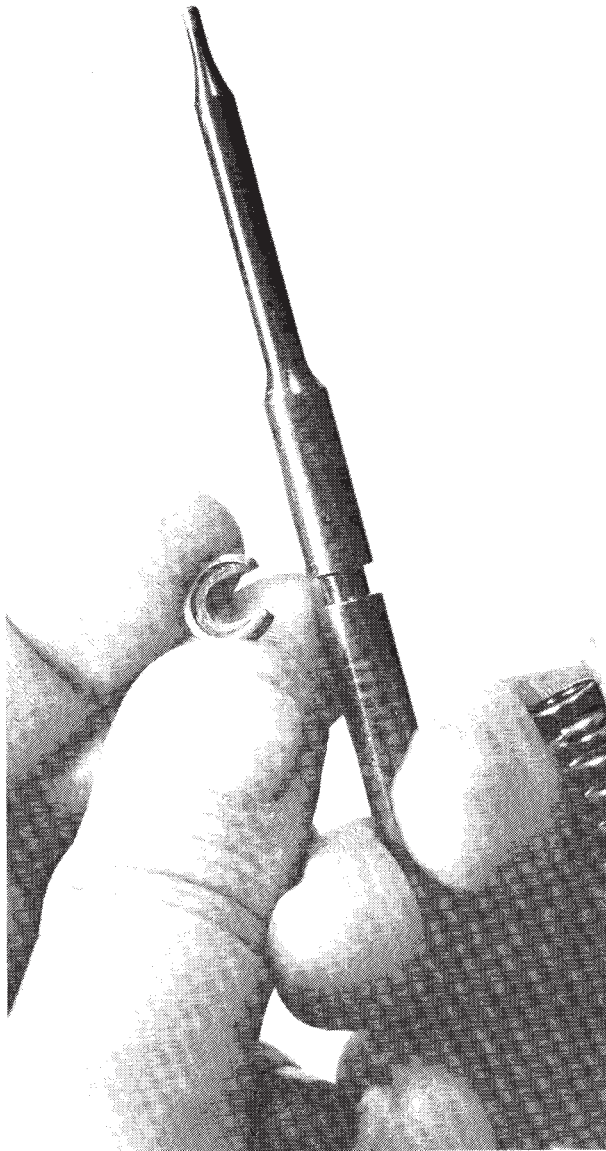
- 19.** To remove the ejector, drift out the angled cross pin at the front of the bolt. **Caution:** The strong ejector spring will expel the ejector as the drift is removed, so ease the ejector out toward the front, and remove the spring.



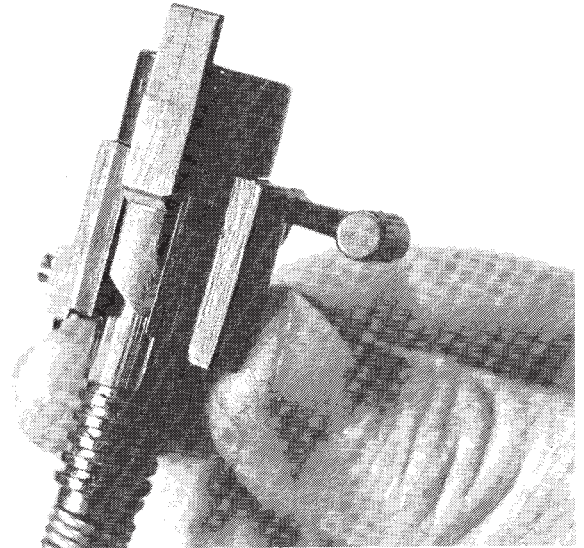
- 20.** To remove the extractor, use a small-diameter drift punch to depress the extractor plunger, accessible through a small hole in the front face of the extractor. While keeping the plunger depressed, move the extractor out of its T-slot in the bolt lug. **Caution:** Restrain the plunger and spring, and ease them out. If the gun is an older one, it will have a long external Mauser-style extractor. For removal details on this type, see the Mauser or Springfield sections.

Reassembly Tips:

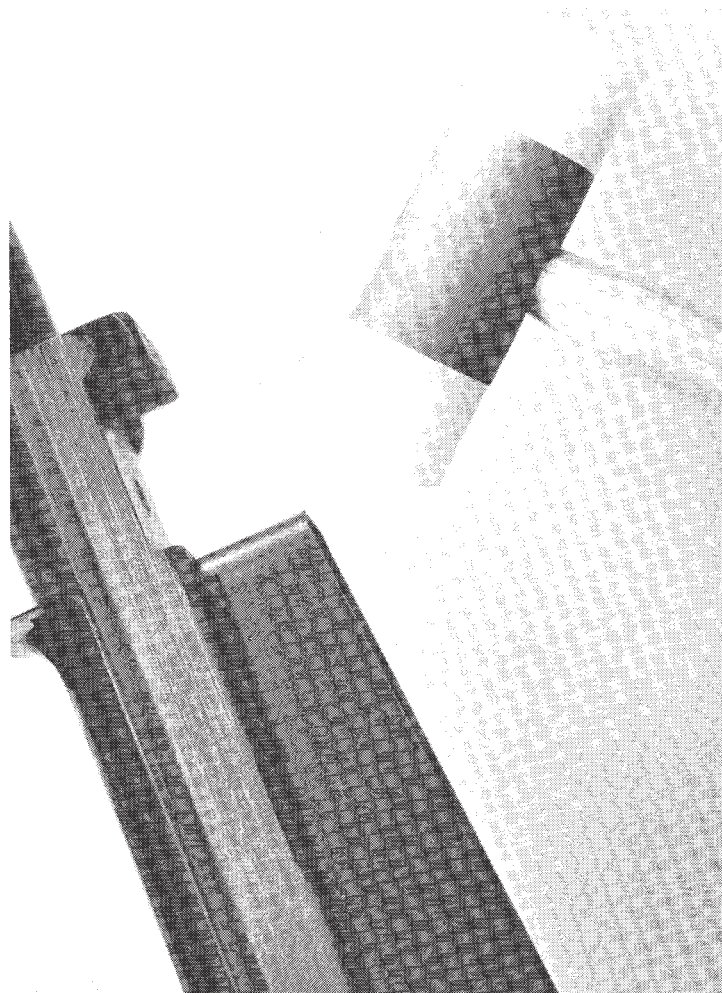
1. When replacing the striker spring, note that the retaining C-clip has a recess on one side. This side must go toward the front. With the forward part of the striker gripped in a vise (as in disassembly), this means that the recess on the C-clip should be installed downward, toward the vise jaws.



2. Before the bolt sleeve and striker assembly can be installed in the bolt body, the striker must be locked to the rear by placing the safety in the on-safe position. Grip the lower lug of the striker firmly in a vise, push the bolt sleeve toward the front, and set the safety. When the sleeve and striker assembly are back in the bolt body, the safety must be released to the off-safe position before the bolt can be reinserted in the receiver.



3. If the magazine housing has been removed, insert its rear edge into the recess first, then tap the front gently inward and toward the rear until it is in place.





Winchester Model 71

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Winchester Model 71 also apply to the following guns:

Browning Model 71
Winchester Model 1886

Browning Model 1886

Data: Winchester Model 71

Origin: United States

Manufacturer: Winchester Repeating
Arms New Haven,
Connecticut

Cartridge: 348 Winchester

Magazine capacity: 4 rounds

Overall length: 40 and 42 inches

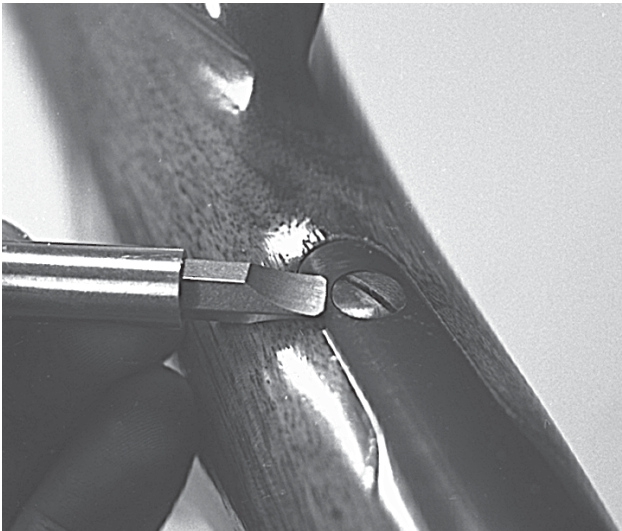
Barrel length: 20 and 24 inches

Weight: 8 pounds

When production of the venerable Model 1886 ended in 1937, it had already been replaced (a year earlier) in the Winchester line by the excellent Model 71. This gun had all the best features of the Model 1886, and was chambered for a new cartridge, the 348 Winchester. The rifle was discontinued in 1948, but it was very popular in the north country, and many are still in use. Although it externally resembles the other lever-action Winchesters, its internal mechanism is quite different, as the takedown sequence will show. In 1987, Browning Arms Co. exactly reproduced this gun in a limited edition as the Browning Model 71, and the instructions will apply.

Disassembly:

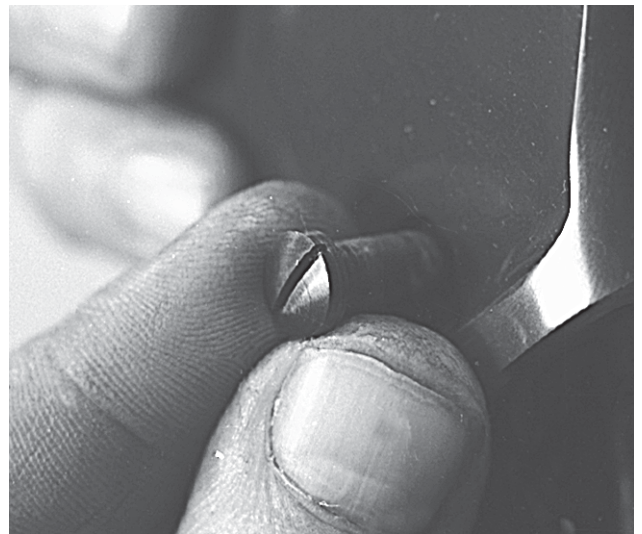
1. Remove the large vertical screw at the rear tip of the upper tang, and take off the buttstock toward the rear. If it is very tight, bump the front of the comb with the heel of the hand to start it.



2. With the hammer in the fired position, drift out the cross pin in the lower tang that retains the hammer spring base. **Caution:** The powerful hammer spring is under some tension, even when at rest. Control the spring base, and ease it toward the rear. Take out the base, and the hammer spring, toward the rear.



3. When the spring base is removed, the small coil spring that powers the trigger-block safety will be freed for removal from the left side beneath the base. Note that this spring and the trigger-block safety, are not found on all Model 71 rifles. At this point, the trigger spring can also be removed from the upper rear of the trigger.

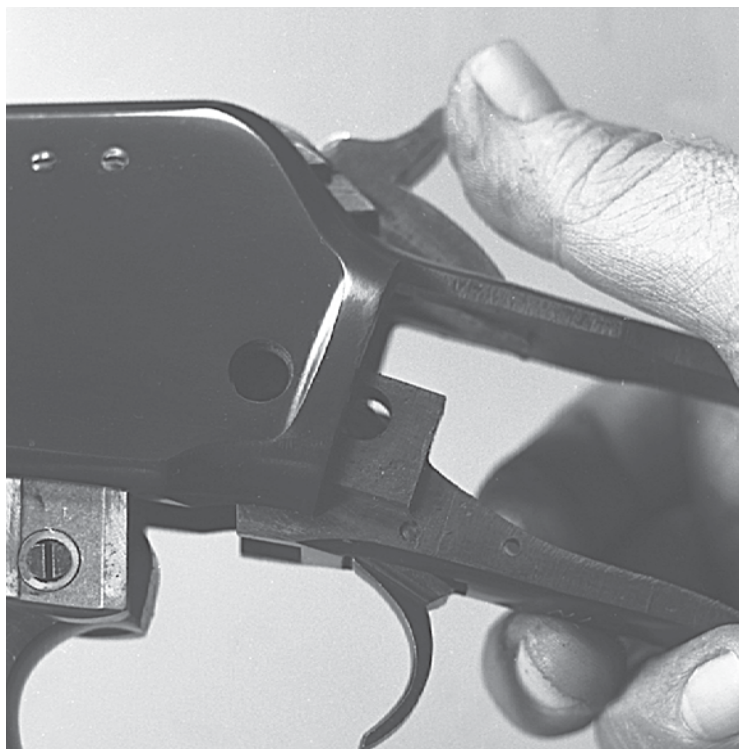


4. Remove the hammer screw toward the left.

- 5.** Remove the hammer screw bushing toward the left. If the bushing is tight, there is a small hole inside it to give lodging for a drift point, inserted from the opposite side, to nudge it out.

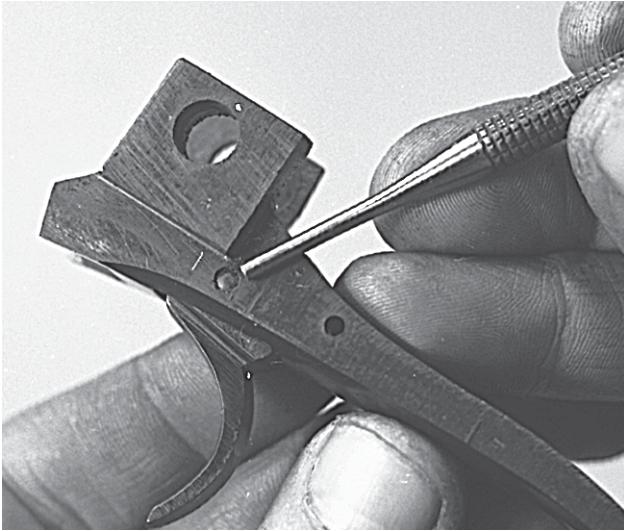


- 6.** Slide the lower tang toward the rear, and remove it. The lever can be partially opened during this operation, for clearance of the trigger.

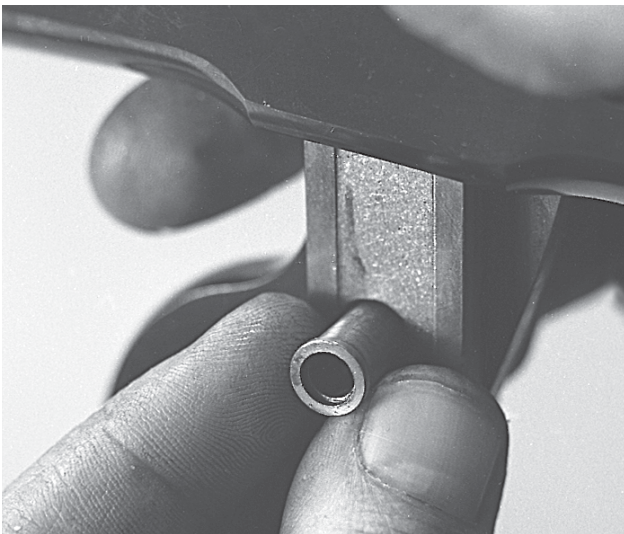
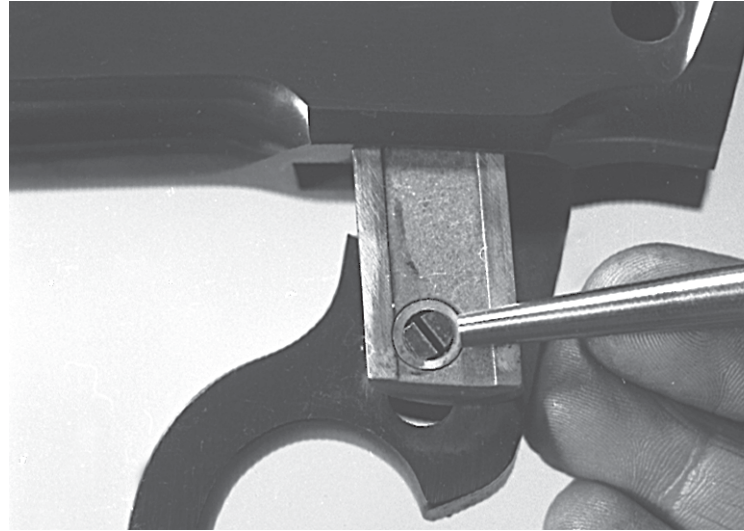


- 7.** Remove the hammer and the attached hammer strut downward.

- 8.** Drifting out the cross pin in the lower tang will allow removal of the trigger and sear from the tang. If the trigger-block safety is present, taking out the trigger will also free it for removal.



- 9.** Drift out the lever bushing pin toward the right. Note that the left tip of this pin may have the look of a screw slot, but it is actually a split tempered pin which locks the lever pivot bushing.



- 10.** Remove the lever pivot bushing toward the left.

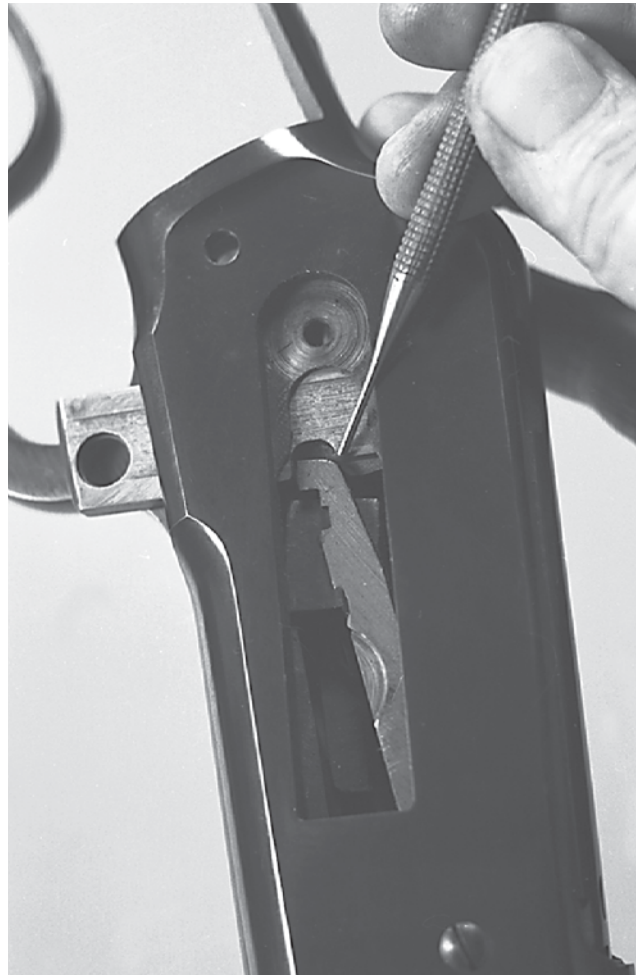
- 11.** Remove the left locking block downward. The right locking block is not removed at this time.





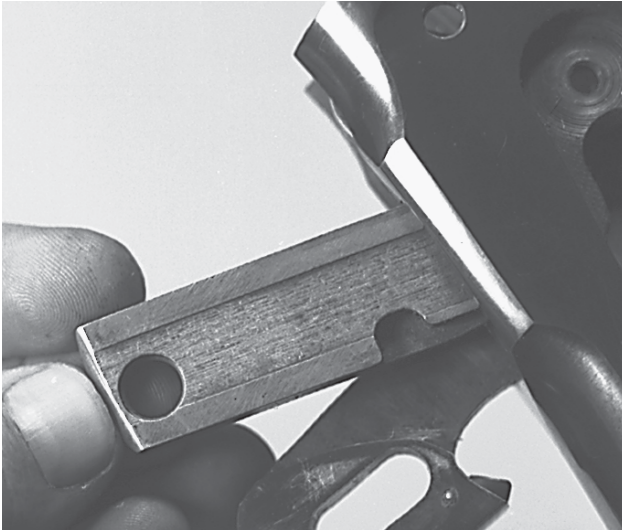
- 12.** Remove the loading gate base screw, on the right side of the receiver, and take off the loading gate assembly toward the right. The gate spring can be removed from its recess on the inside of the base, and drifting out the hinge pin will allow separation of the gate from the base.

- 13.** With the bolt pushed back to the front, and the right locking block pushed partially into place to lock it, align the recess on the front of the locking block with the rear tip of the cartridge guide. Remove the cartridge guide screw, and move the cartridge guide toward the rear to free it from its recess.

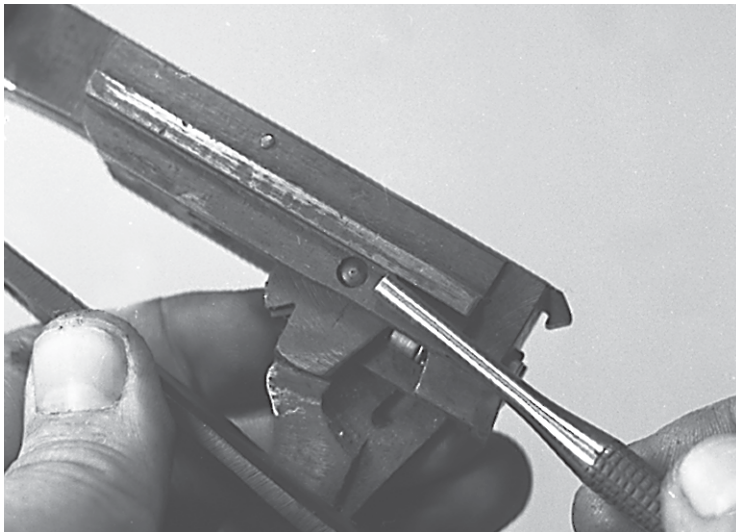
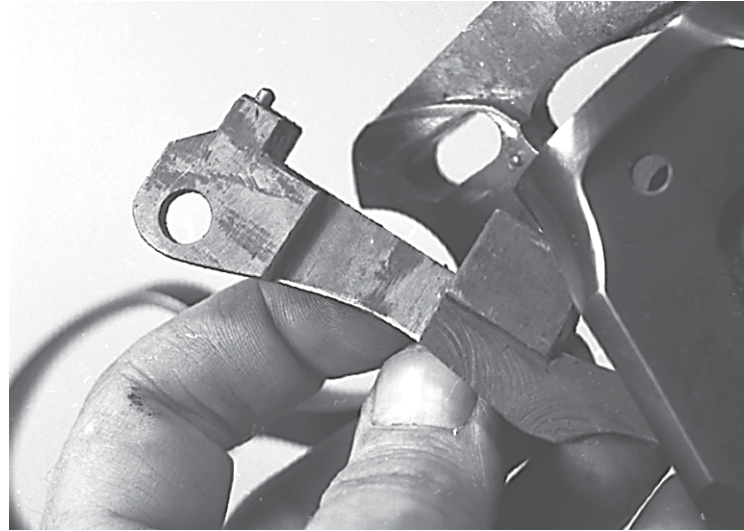


- 14.** Open the bolt, and tip the front end of the cartridge guide inward. Remove the guide from the receiver opening.

- 15.** The right locking block can now be removed downward.



- 16.** Move the bolt all the way to the rear, out of its tracks in the receiver, and tilt the assembly to clear the carrier. Remove the carrier downward. The carrier plunger and spring can be removed by drifting out the pin at the rear of the carrier.

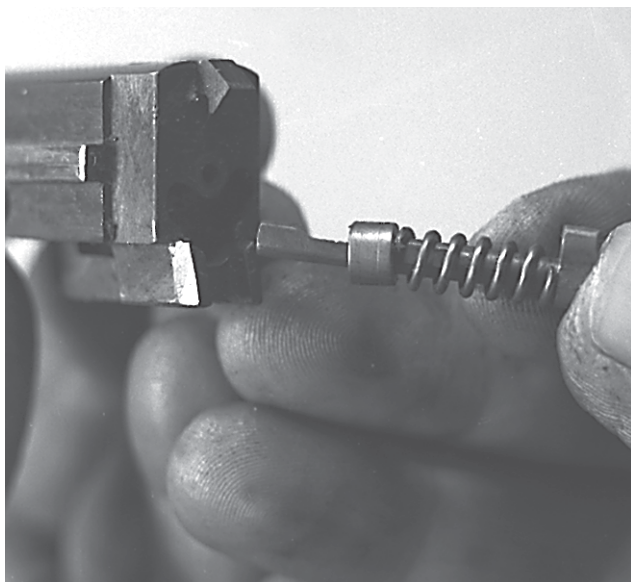


- 17.** Drift out the lever link pin, and separate the lever from the bolt. **Caution:** This will also release the ejector and its spring and collar, so control them and ease them out.

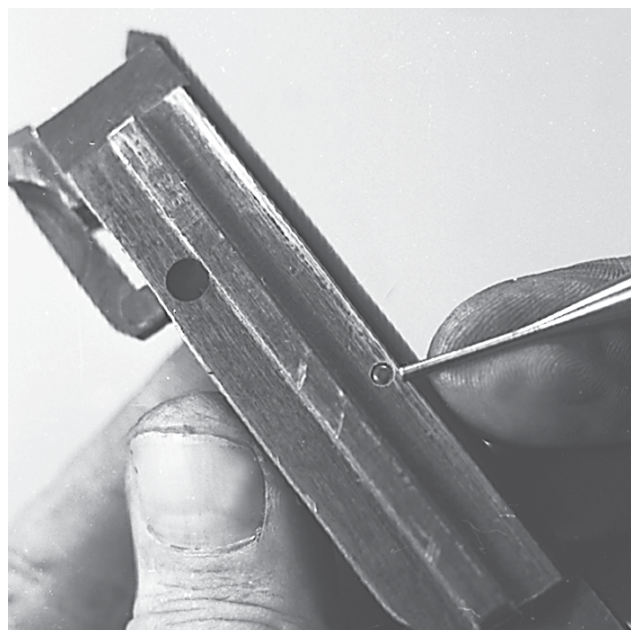
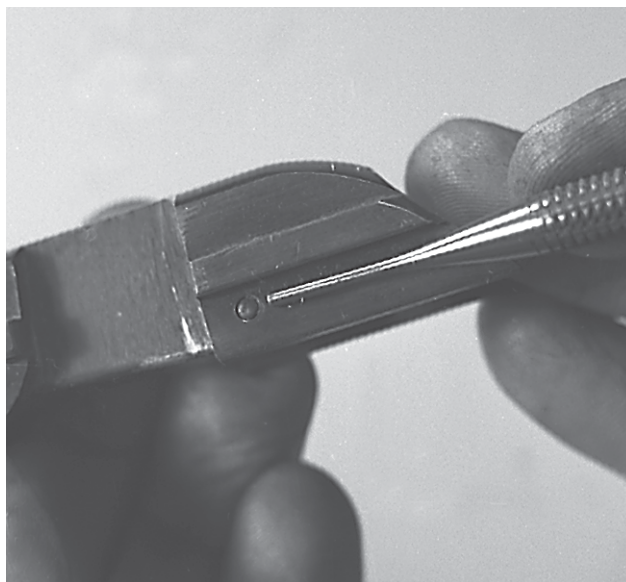
- 18.** Remove the lever downward. The lever latch plunger and its spring are retained in the lever by a cross pin. Control the plunger, and ease it out.



- 19.** When removing the ejector from the front of the bolt, take care not to lose the small collar at the rear of the ejector spring.



- 20.** Drifting out the cross pin at the lower rear of the bolt will allow removal of the firing pin toward the rear.



- 21.** Drifting out the cross pin at top center will allow removal of the extractor. Don't lift the extractor upward. Hook a tool under its beak at the front, and lever it out forward.

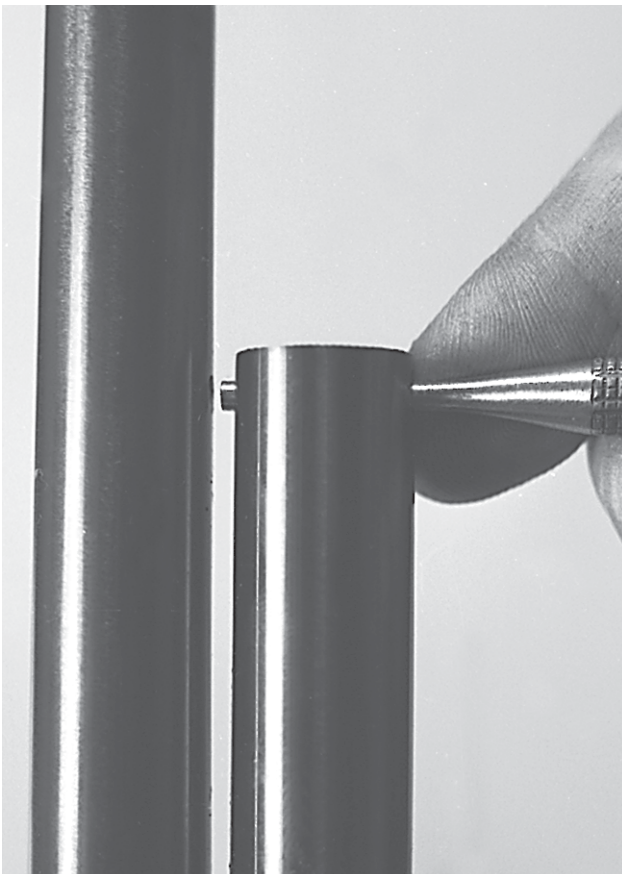
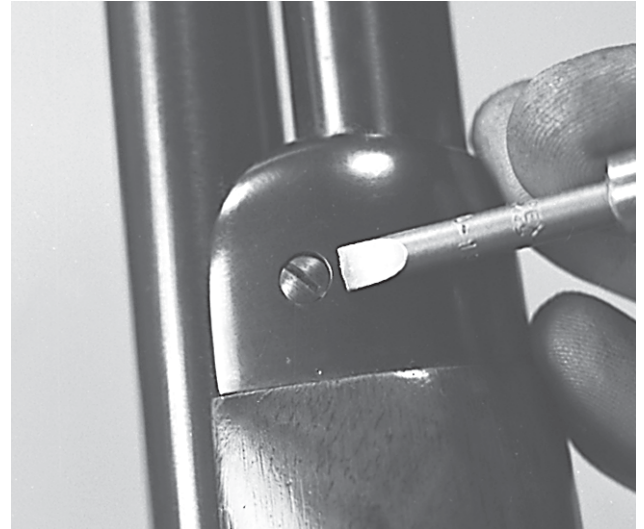


- 22.** Remove the large screw on the left side of the receiver, and take out the cartridge stop from inside the receiver.

- 23.** Remove the screw on the underside, near the front end of the magazine tube, and take out the end piece toward the front. **Caution:** *The magazine spring is partially compressed, so control it and ease it out.* Remove the spring and follower toward the front.



- 24.** Remove the screws on each side of the forend tip, and slide the tip off toward the front.



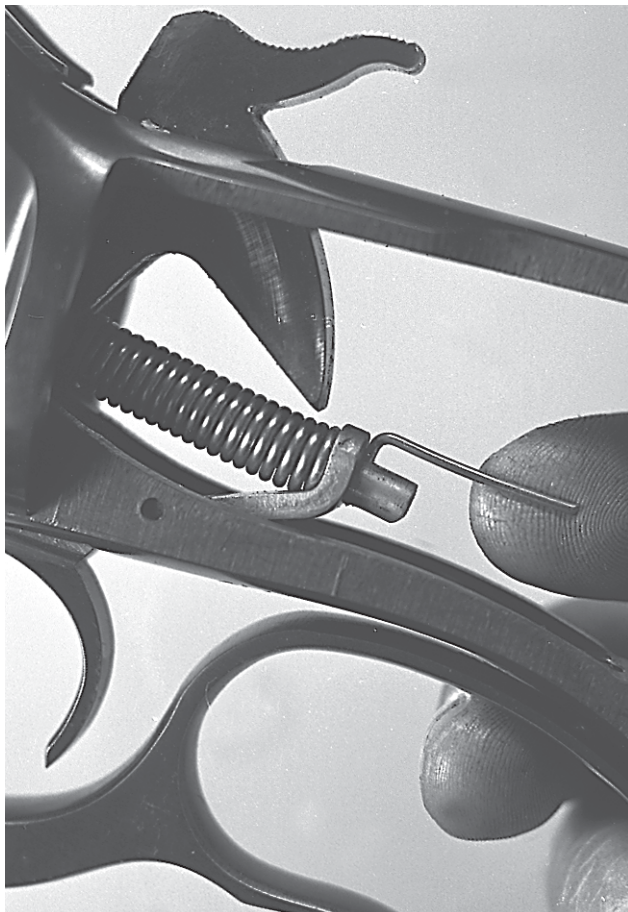
- 25.** Insert a drift punch through the screw holes in the end of the magazine tube, and unscrew the tube counter-clockwise (front view). Remove the tube toward the front. Drift the forend tip tenon out of its dovetail toward the right, and move the forend forward and off.

Reassembly Tips:

1. Before replacing the hammer bushing and screw, insert a tapered drift punch to align the hammer, carrier, and lower tang loops.



2. Replacement of the hammer spring system will be easier if a slave pin is used, as shown, to restrain the spring during installation. If the trigger-block safety is present, install the hammer spring system, then insert the safety spring through the opening in the base, compressing it to snap it into place.



Winchester Model 1873

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Winchester Model 1873 also apply to the following guns:

Cimarron 1873 30" Express

Cimarron 1873 Short Rifle

E.M.F. Model 1873

Navy Arms Model 1873-Style Rifle

Uberti 1873 Carbine

**Cimarron 1873 Button Half-Magazine
Dixie Model 1873**

Mitchell 1873 Winchester Replica

Uberti 1873 Sporting Rifle

Uberti 1873 "Trapper's Model"

Data: Winchester Model 1892

Origin: United States

Manufacturer: Winchester Repeating
Arms Company
New Haven, Connecticut

Cartridges: 32-20, 38-40, 44-40

Magazine capacity: 15 rounds (12 in carbine)

Overall length: 43 inches
(carbine, 39 inches)

Barrel length: 24 inches
(carbine, 20 inches)

Weight: 8-1/4 pounds
(carbine, 7-3/4 pounds)

Originally made from 1873 to 1923 by Winchester, the Model 1873 has been reproduced in Italy by Aldo Uberti, and has been offered by several importers. The gun shown here is the version marketed by Dixie Gun Works. There are some small mechanical differences between the modern Italian guns and the original Winchesters, and these will be noted in the instructions.

Disassembly:

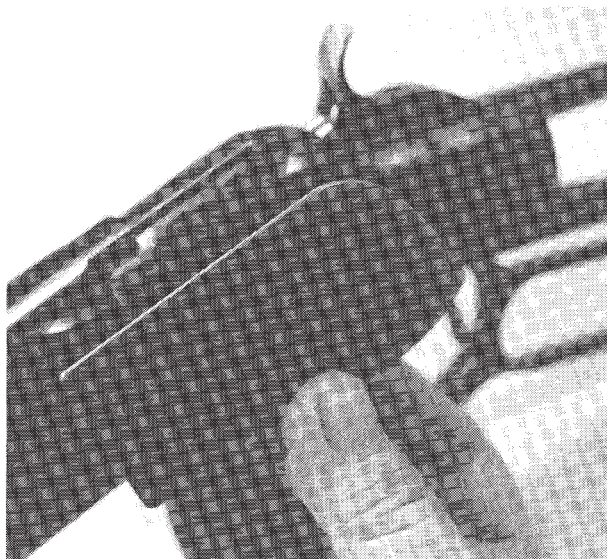
1. Remove the large vertical screw at the rear tip of the upper tang. Remove the screw on the underside, at the rear tip of the lower tang.



2. Remove the buttstock toward the rear. If it is tight, bump the front of the comb with a rubber mallet.

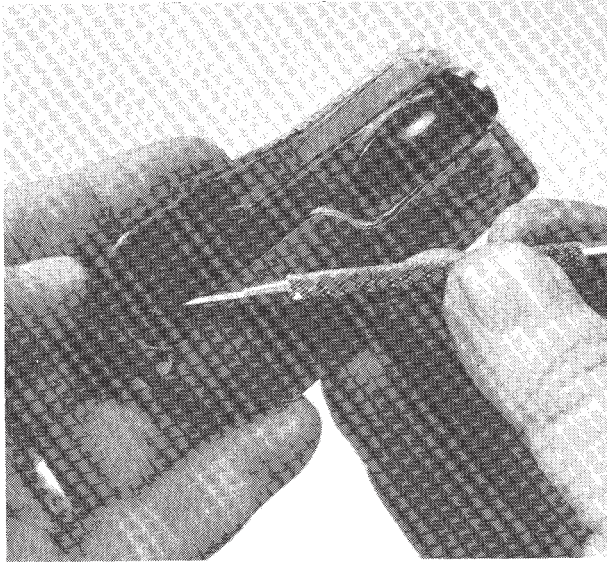


3. Remove the cross screw that retains the sideplates.

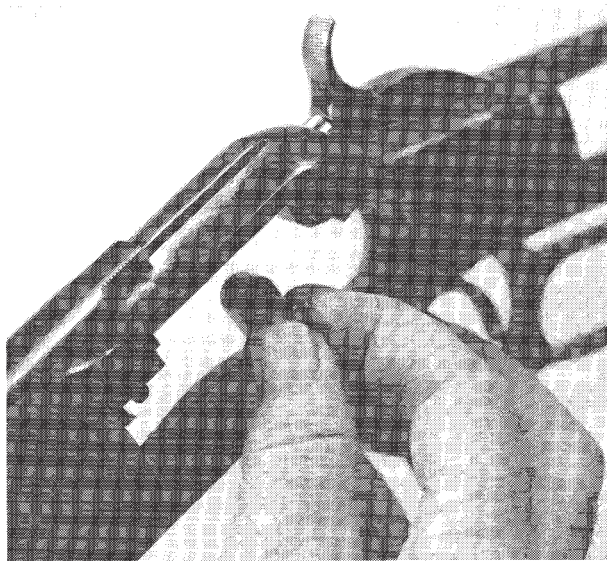


4. Tip the sideplates outward at the rear, and remove them. If they are tight, tap the side of the receiver (not the sideplate) with a nylon hammer.

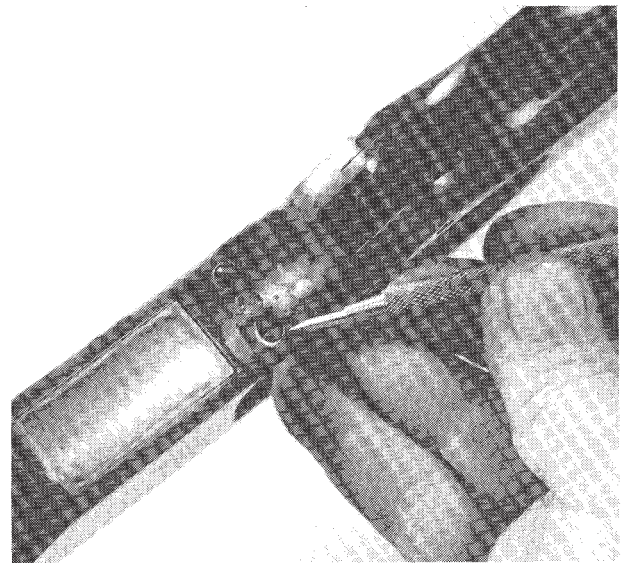
- 5.** The loading gate, which is its own spring, is attached to the inside of the right sideplate with a screw.



- 6.** Remove the left and right link assemblies. Removal of the center pins in the links is not advisable, except for repair.

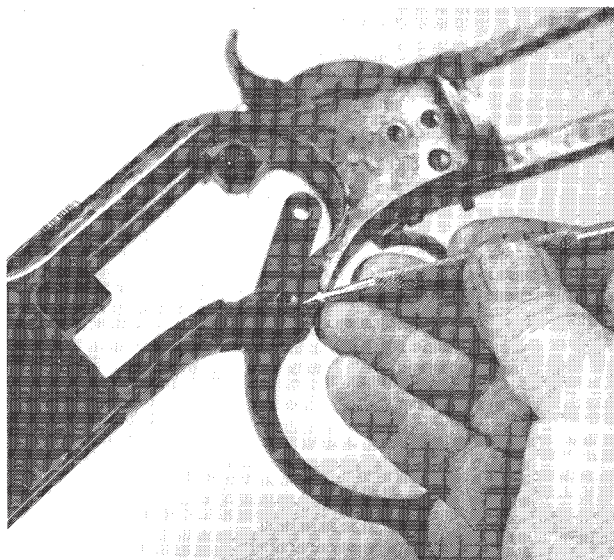


- 7.** Remove the link pin from the upper arm of the lever. Note that in an original Winchester, this pin is not routinely removed.

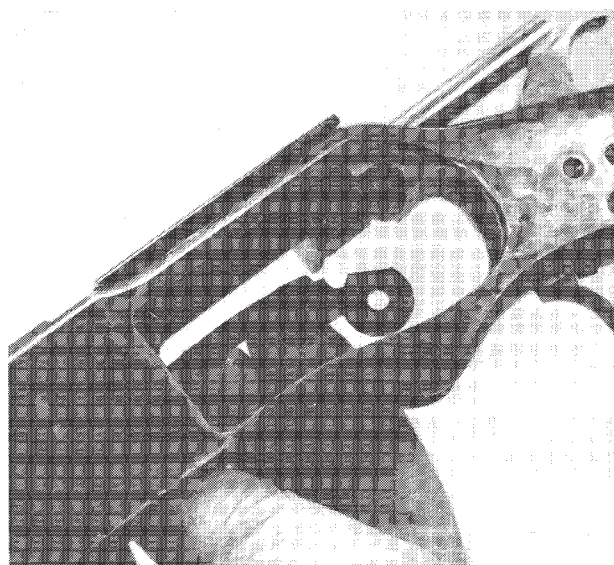
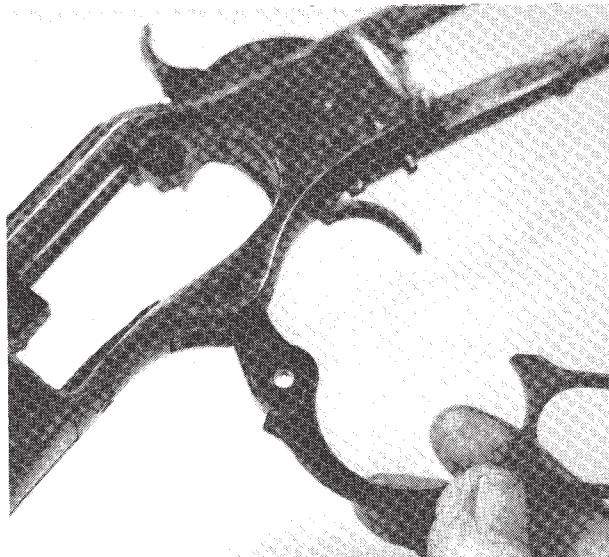


- 8.** Remove the two screws on the underside, forward of the lever, and take out the lever detent spring on the left, and the carrier spring on the right.

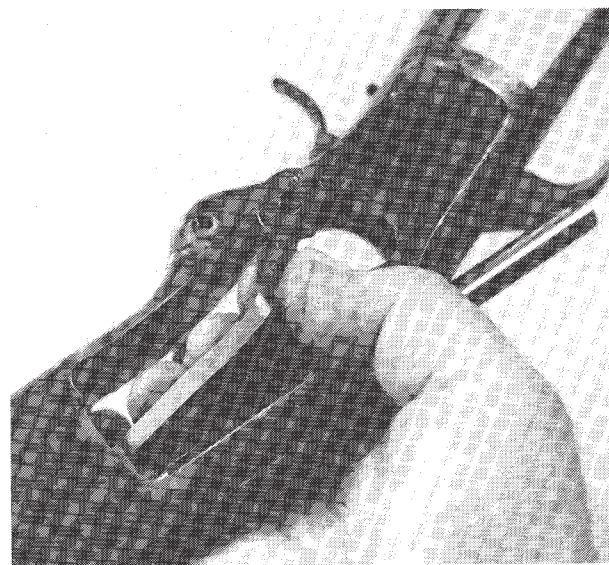
- 9.** Remove the lever cross screw.



- 10.** Remove the lever downward. In an original gun, the lever is not removed at this point.

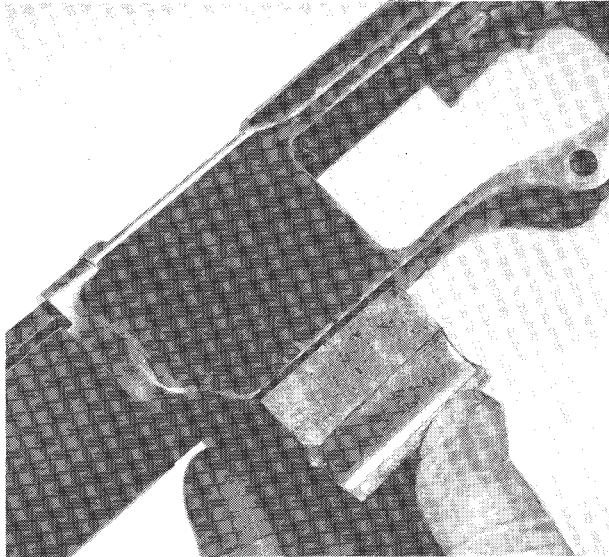


- 11.** With the bolt moved fully to the rear, the carrier lever may be lifted from its recess in the receiver by pushing up on the carrier.

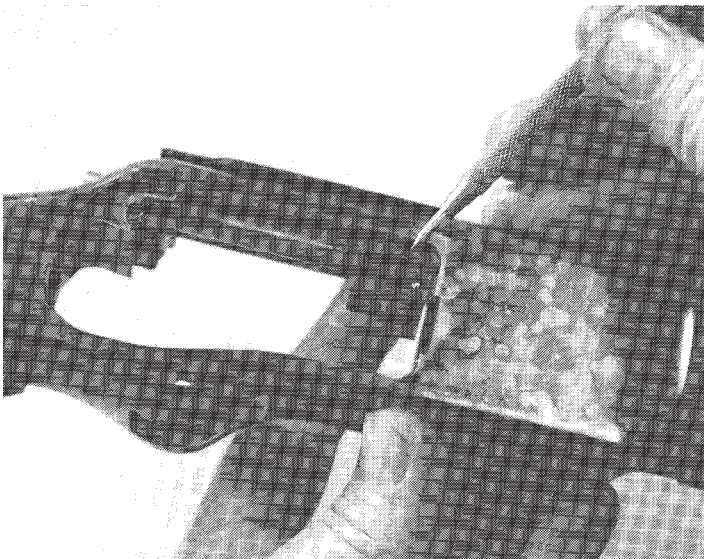
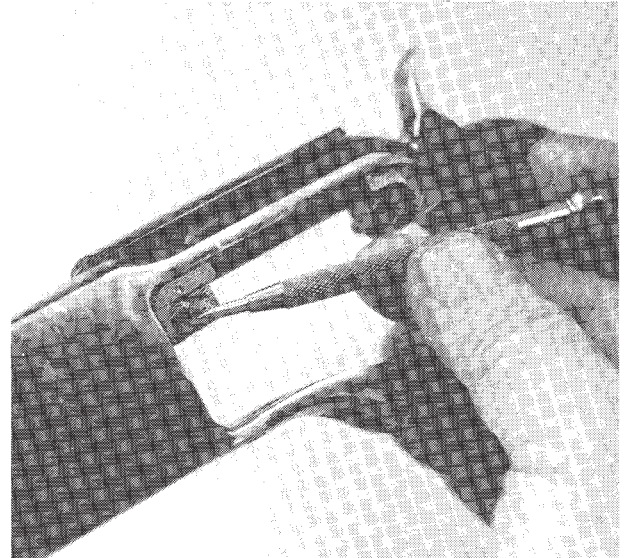


- 12.** With the carrier up, move the lever to the rear. Tip the lever out to the position shown, toward the right, and remove it rearward. Note: This is not possible with an original gun.

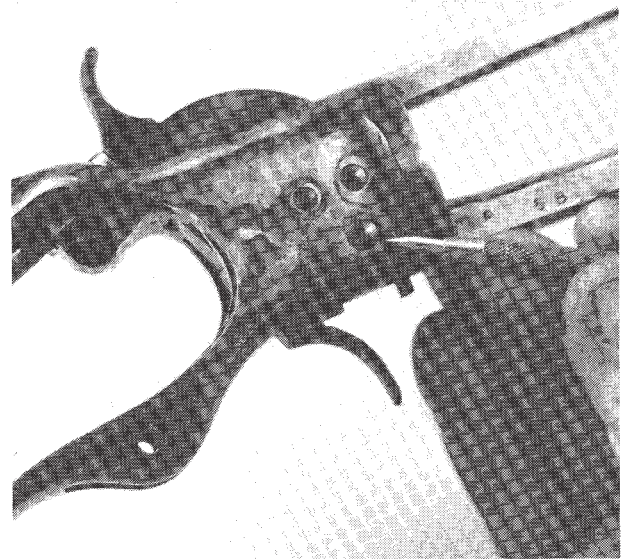
- 13.** Remove the carrier from the receiver. Again, this is a later step with an original gun.



- 14.** Drift out the forward link cross pin in the bolt. If the gun is an original Winchester, this will release the firing pin retractor to be taken out downward, and by depressing the hammer, the combined bolt rod and firing pin can be taken out rearward.

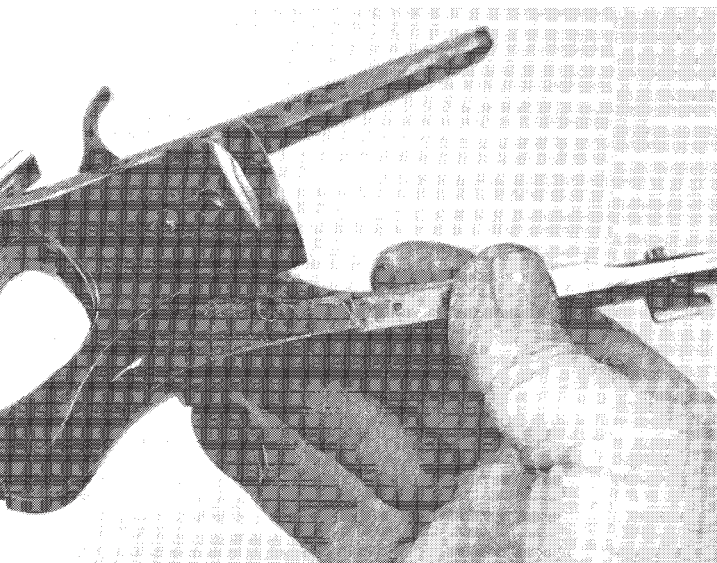


- 15.** In the reproduction gun, there is a rebound spring rather than a retractor. The separate bolt rod, and the firing pin and its spring, are retained at the rear of the bolt by this small cross pin. After removal of the pin, the rod will not clear the hammer for removal, but it can be moved to the rear for access to the firing pin and its spring, for repair purposes.

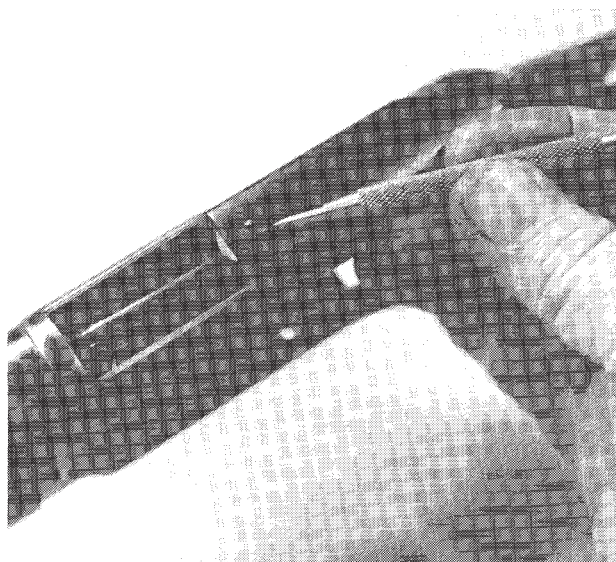
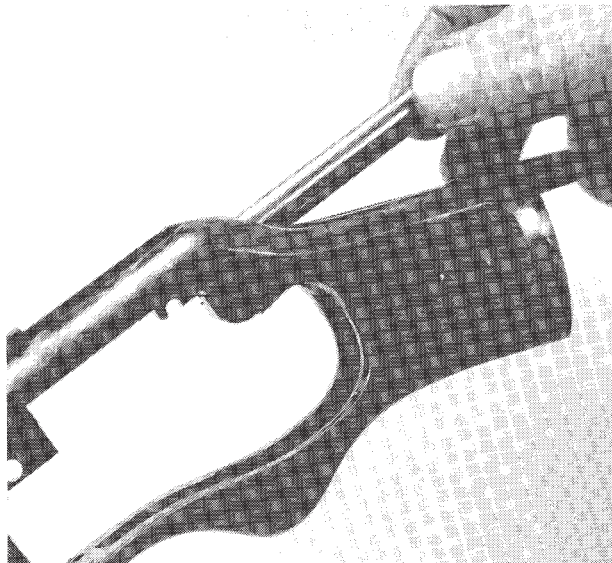


- 16.** Depress the safety catch, pull the trigger, and set the hammer in its safety notch. Remove the screws at lower rear on each side of the receiver.

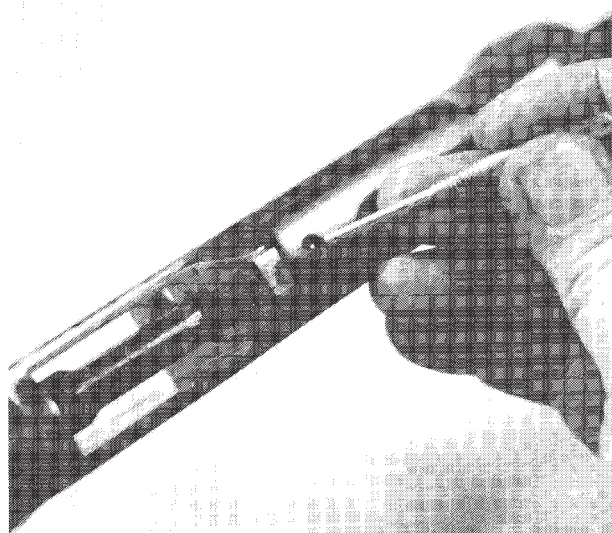
- 17.** Remove the lower tang assembly downward. If the gun is an original Winchester, the finger lever, carrier lever and carrier can now be removed.



- 18.** The bolt rod can now be taken out rearward.

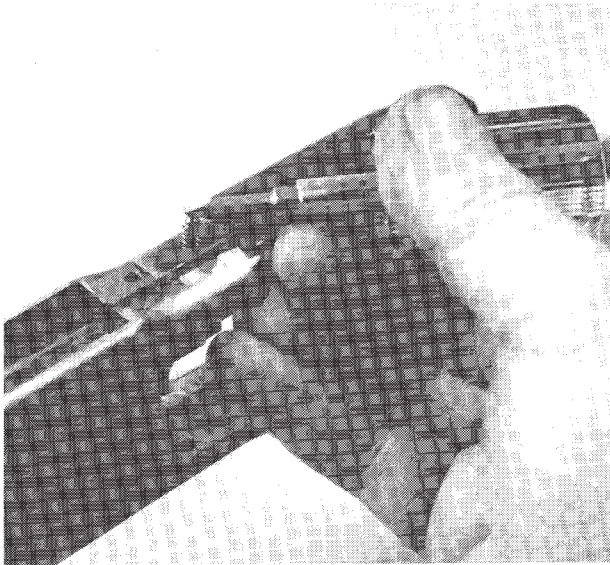


- 19.** Remove the dust cover screw.

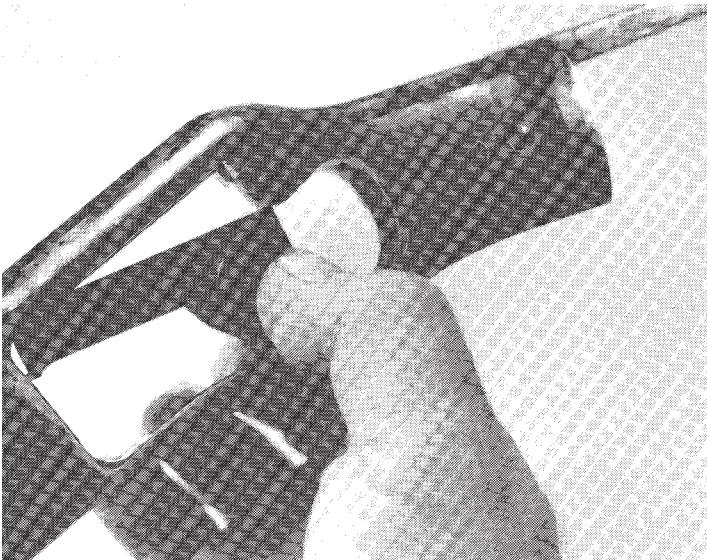
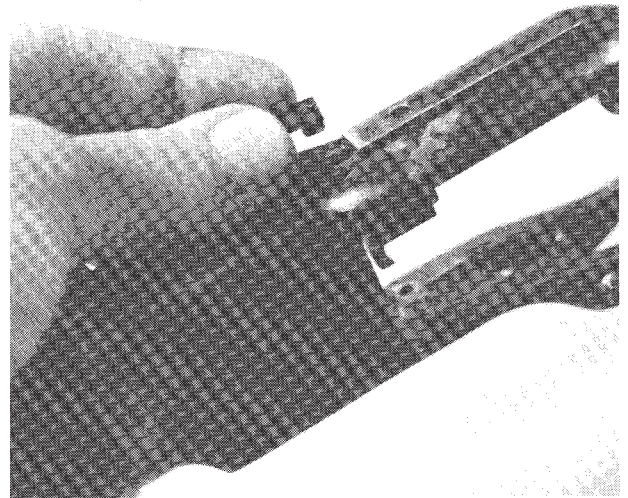


- 20.** Move the dust cover to the point shown, and depress the cover tension ball and spring.

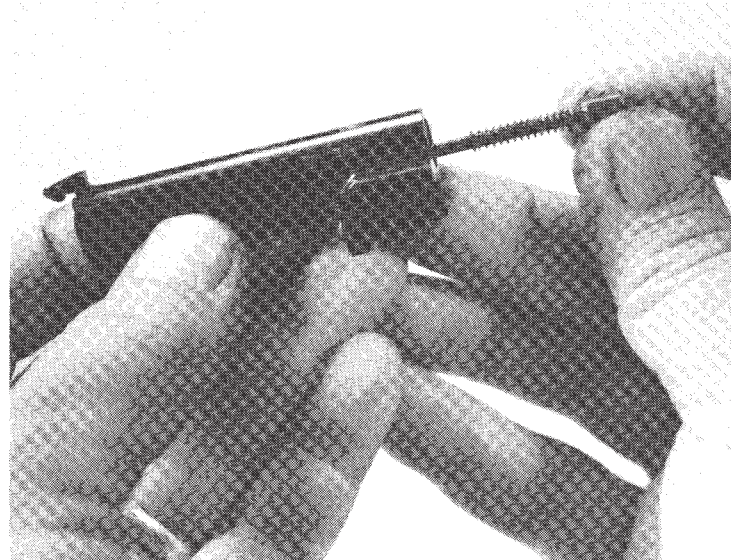
- 21.** Move the dust cover off rearward. **Caution:** Control the ball and spring as they are cleared by the edge of the cover. Use a magnetized tool to remove the ball and spring.



- 22.** Remove the dust cover base from the top of the receiver.

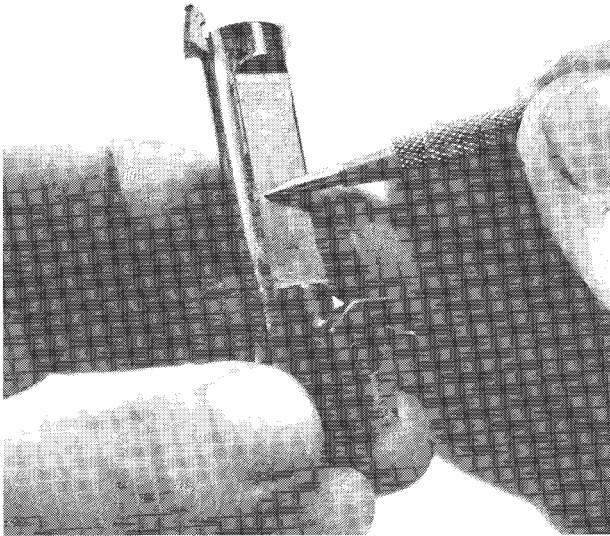


- 23.** Move the bolt rearward, tip it downward, and remove it toward the side.



- 24.** Remove the firing pin and its return spring from the bolt.

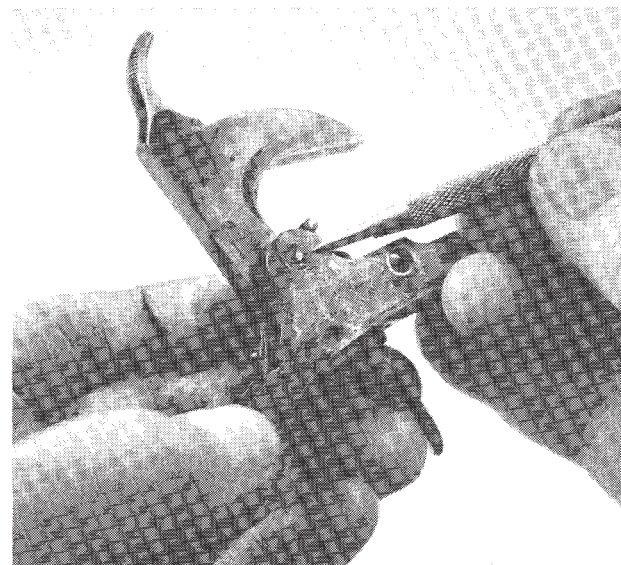
- 25.** The extractor is retained by a cross pin, and the ends of the pin are contoured to the curvature of the top of the bolt. Removal should be only for repair purposes. The extractor is its own spring.



- 26.** Depress the safety catch to free the trigger, and release the hammer from its safety step to go all the way over forward. Depress the front of the hammer spring, and unhook the hammer stirrup from the spring.

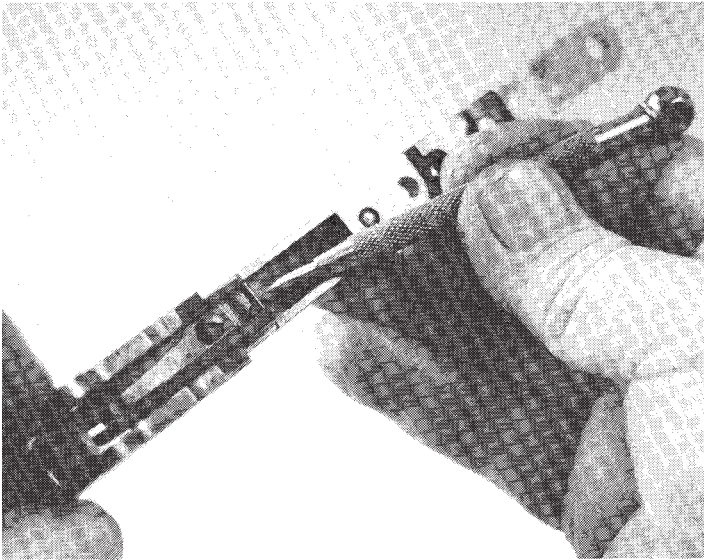


- 27.** Back out the smaller screw, forward of the one indicated, to release any tension on the spring. Remove the spring screw, indicated, and take off the spring.

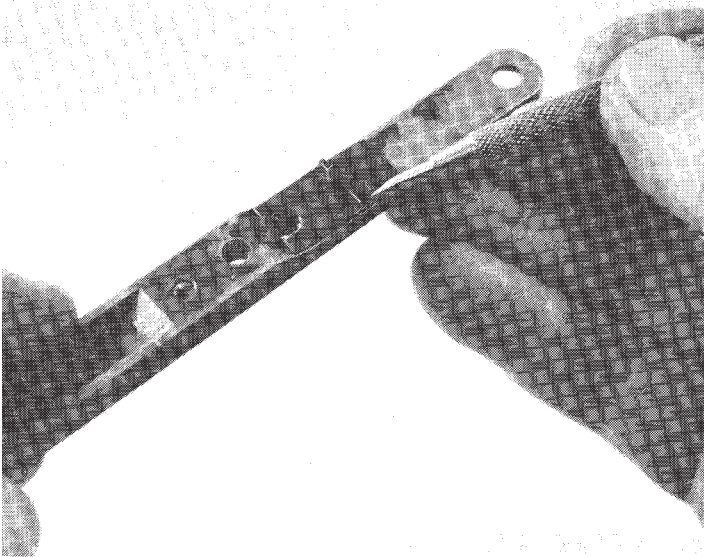
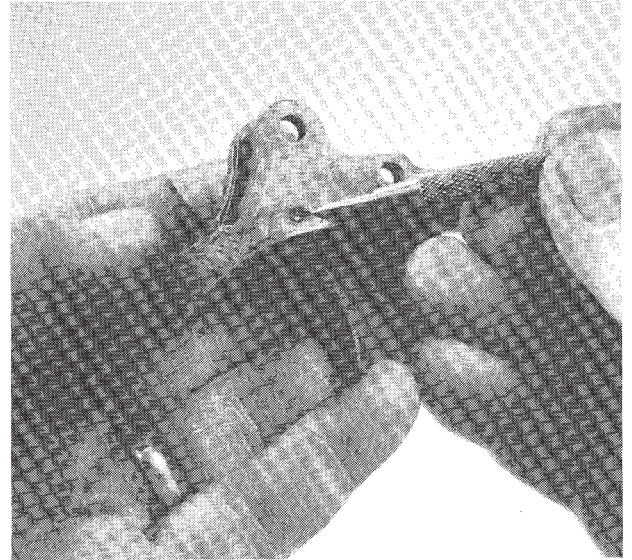


- 28.** Drift out the cross pin, and remove the hammer.

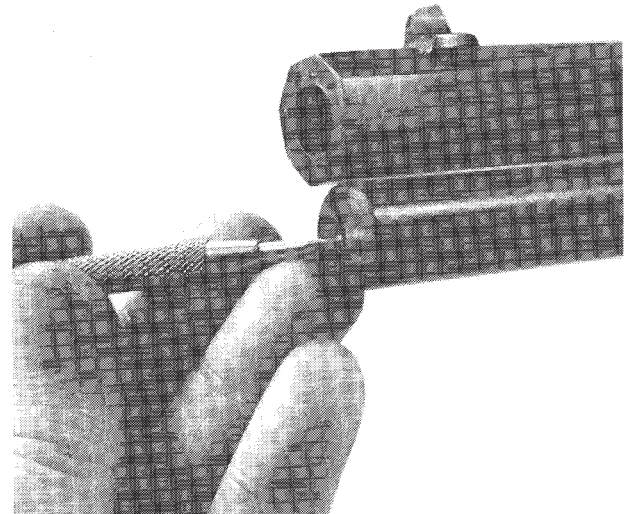
- 29.** The lever safety catch is pivoted and retained by a cross pin at the rear. The superposed lever safety and trigger springs are retained by a vertical screw. If this system is to be taken apart, remove the screw and springs first.



- 30.** Drifting out the trigger cross pin will free the trigger and sear assembly, including the sear spring, for removal. In an original gun, the trigger and sear are a single part.

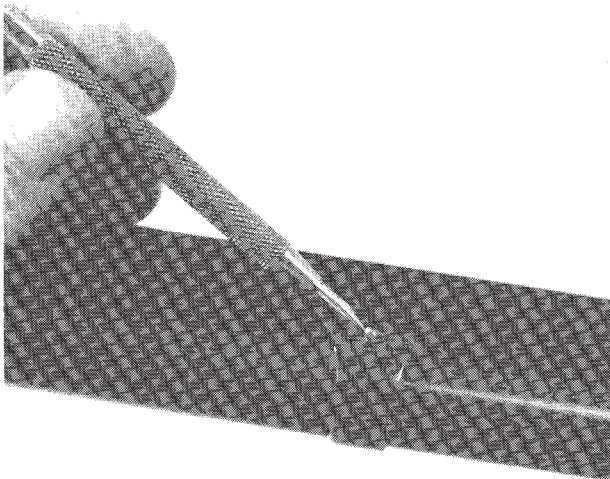
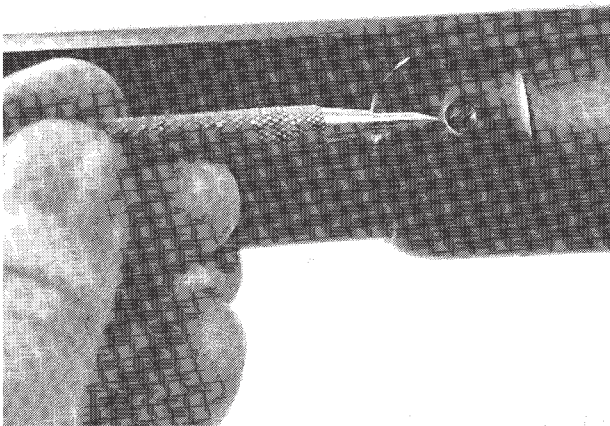


- 31.** The lever latch and its spring are retained by a cross pin at the rear of the tang unit.



- 32.** On the original Winchester, the magazine end plug is retained by a vertical screw on the underside at the muzzle. On this version, the plug has a screw slot, and it is threaded directly into the magazine tube. Removal will allow the magazine spring and follower to be taken out toward the front. Control the spring.

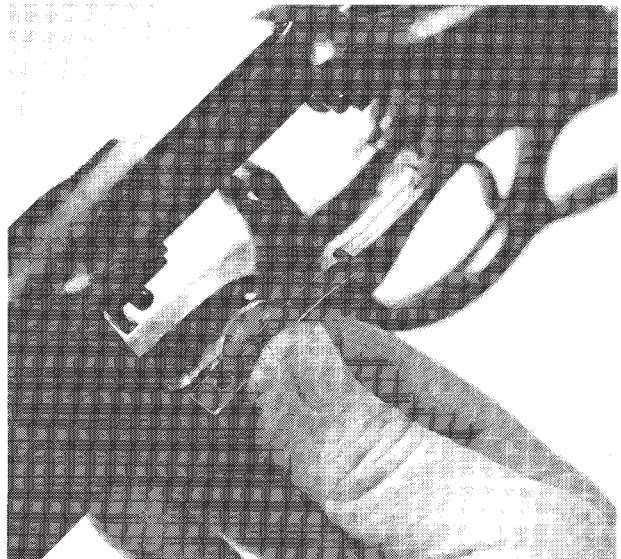
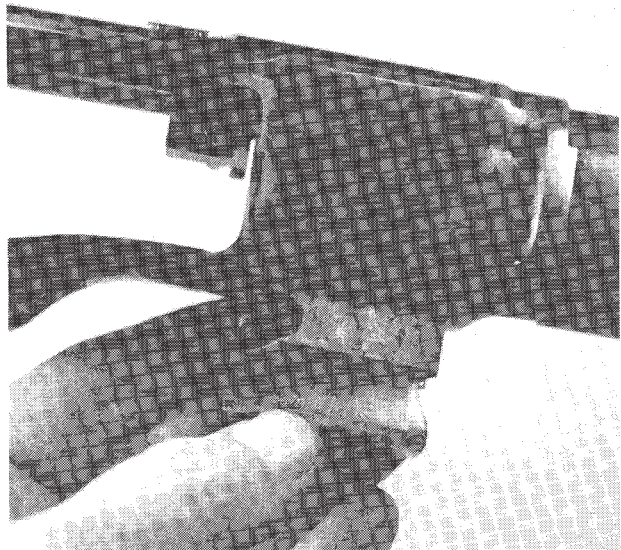
- 33.** The forend cap is retained by a screw on each side. Full removal of the cap and forend, however, requires removal of the magazine tube.



- 34.** The magazine tube is retained by a cross pin in the tube loop. After the pin is drifted out, the tube is taken out toward the front. This will free the forend and its cap for removal. The tube loop and the forend cap base can then be driven out of their dovetail mounts on the barrel.

Reassembly tips:

- 1.** When replacing the carrier, be sure the side with the large cut at the rear is on the right side.



- 2.** When replacing the carrier spring and the lever detent spring, be sure each is on the correct side, and that the in-turned tips bear properly on the lever and the carrier lever. If the springs are not positioned correctly, the sideplates cannot be installed.

Winchester Model 1892

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Winchester Model 1892 also apply to the following guns:

Browning B92

Rossi M92 SRS

Winchester Model 53

Rossi M92 SRC

Spanish "El Tigre" Carbine

Winchester Model 65

Data: Winchester Model 1892

Origin: United States

Manufacturer: Winchester Repeating
Arms Company
New Haven, Connecticut

Cartridge: 25-20, 32-20,
38-40, and 44-40

Magazine capacity: 14 rounds (rifle),
12 rounds (carbine)

Overall length: 41-3/4 inches

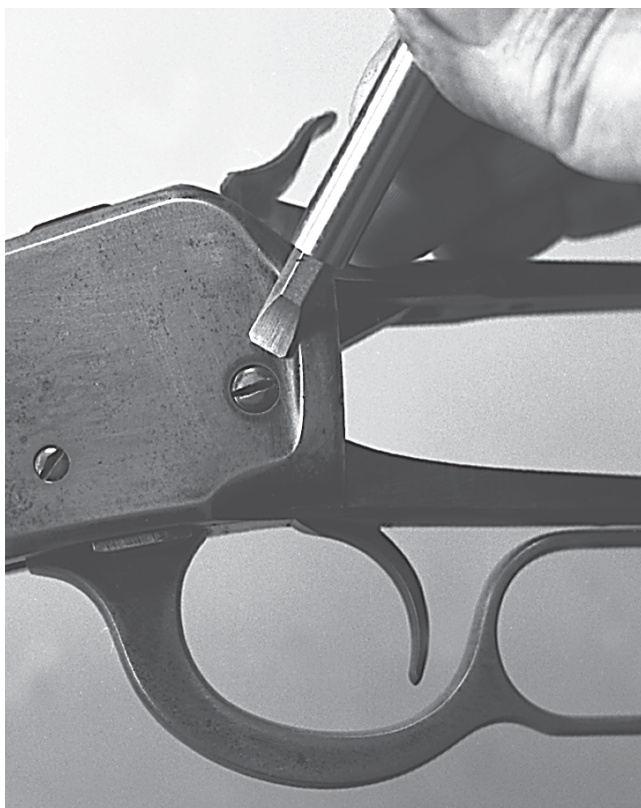
Barrel length: 24 inches
20 inches (carbine)

Weight: 6-3/4 pounds (rifle)

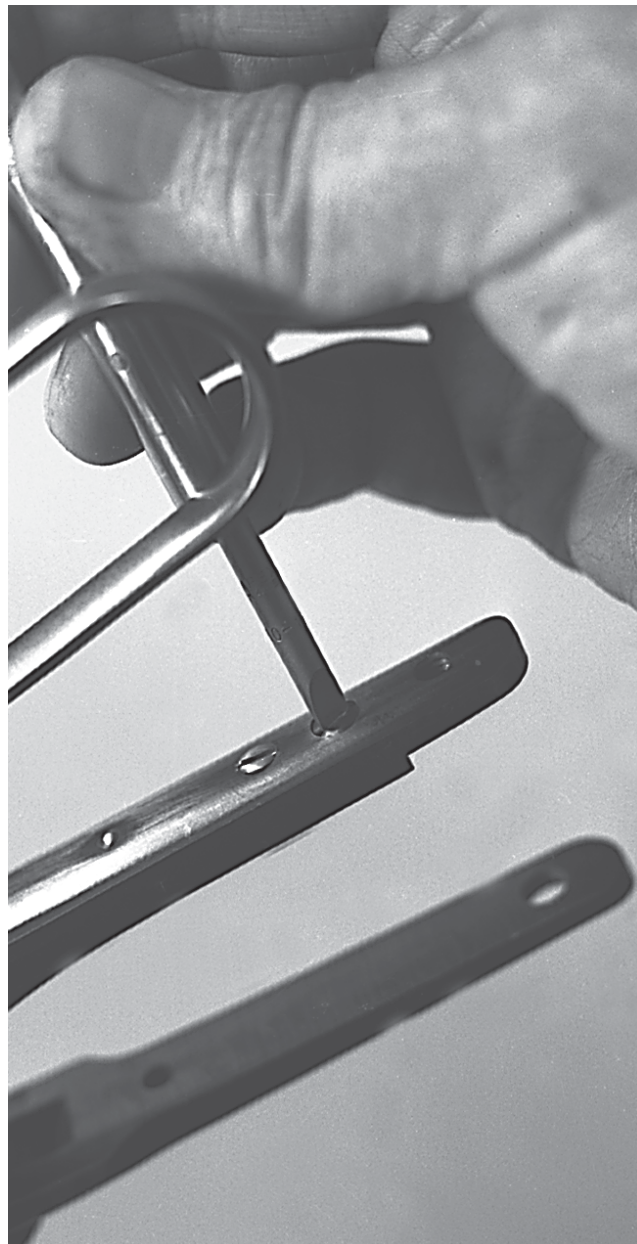
Another of John M. Browning's masterpieces for Winchester, the Model 1892 was made in rifle form until 1932, and in carbine style until 1941. Slim, elegant, and totally reliable, the Model 92 was popular for many reasons, one of which was its chambering for the same cartridges as the Colt revolver in its three larger calibers. In today's market, collectors and shooters vie for the few remaining guns in circulation. I know of several of these guns that are still in regular use as small to medium-size game rifles. The Model 53 and Model 65 Winchesters are mechanically identical. Browning made an exact copy and called it the B92; Rossi of Brazil had two versions; and the old Spanish "El Tigre" is based on the Model 1892. These instructions generally apply to all versions.

Disassembly:

1. Remove the vertical stock mounting screw, located at the rear of the upper tang, and take off the stock toward the rear. If it's tight, bump the front of the comb with the heel of the hand to start it.

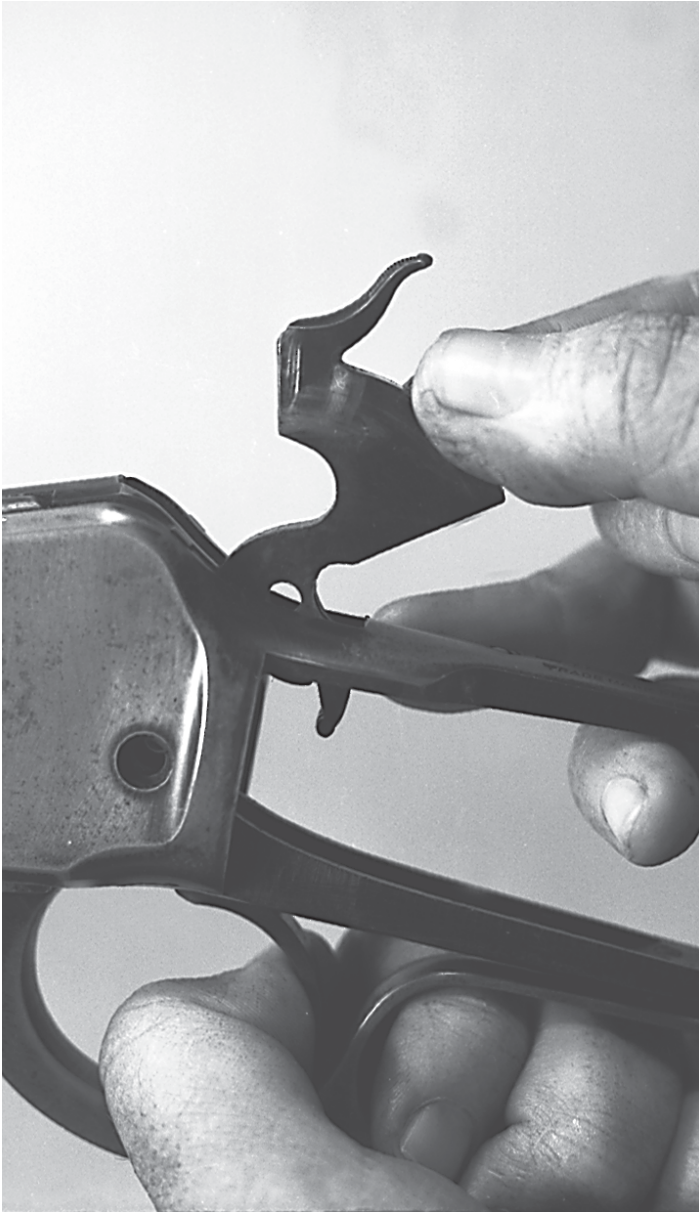


2. Partially open the lever to give access to the hammer spring screw and strain screw, at the rear of the lower tang. Loosening the strain screw will make removal of the spring screw easier, but this is not absolutely necessary. After removal of the spring screw, disengage the spring hooks from the hammer stirrup, and take out the hammer spring toward the rear.

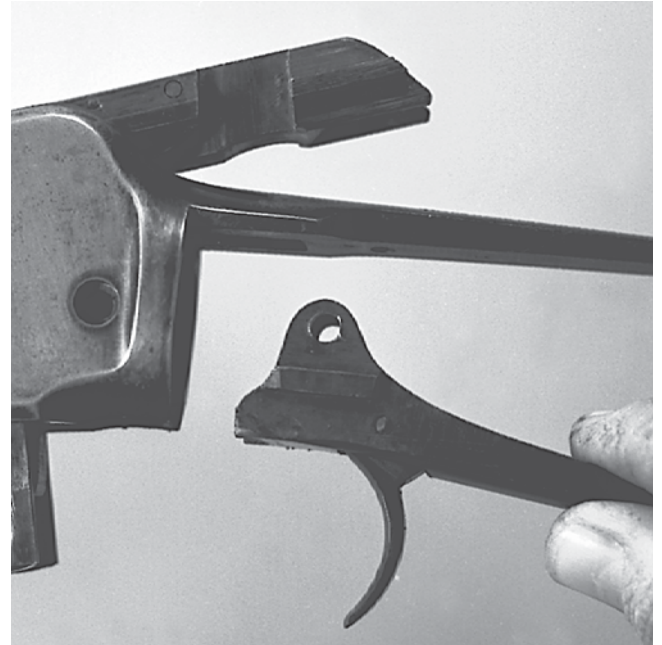


3. Remove the cross screw on the left side at the rear of the receiver that retains the hammer and the lower tang/trigger housing unit. Pulling the trigger to relieve its spring tension on the hammer will make the removal of the screw easier.

- 4.** Hold the trigger to the rear, and remove the hammer upward and toward the rear.



- 5.** The lower tang/trigger housing unit may now be slid out toward the rear. If the unit is very tight, insert a bronze or aluminum rod through the spring screw hold, which has no threads (not the stock screw hole), and tap the rod to start the unit out. Drifting out the cross pin in the lower tang unit will allow removal of the trigger downward.



- 6.** The trigger spring is retained by a vertical screw inside the lower tang, and the spring is removed upward. The one shown has a round wire spring, but early guns will have a blade type.



- 7.** With the lever opened, remove the lock screw in the left locking block, the screw nearest its lower edge.

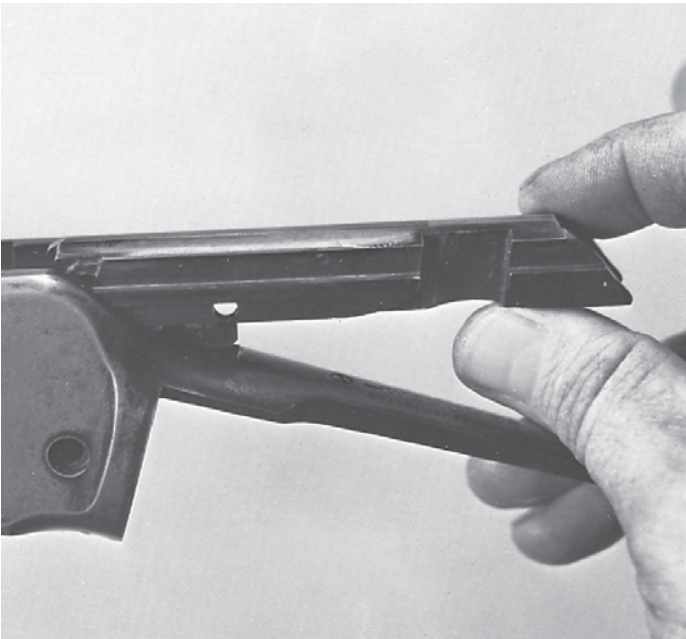
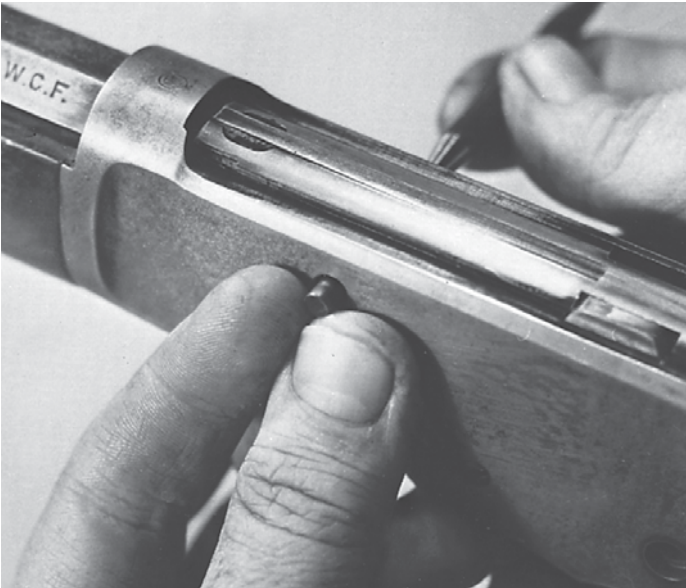


- 8.** The part above the screw, although slotted, is not a screw. It is the cross pin that links the locking blocks to the lever. Push out the cross pin toward the left. Then remove the right and left locking blocks downward.



- 9.** Remove the lever pin cover screw, located on the left side of the receiver at the upper front.

- 10.** Move the breechblock (bolt) to the fully closed position, and insert one of the locking blocks from below to hold it in place. Insert a drift punch into the access hole on the right side of the receiver, and push out the lever/bolt connecting pin toward the left. Remove the lever downward and toward the rear.

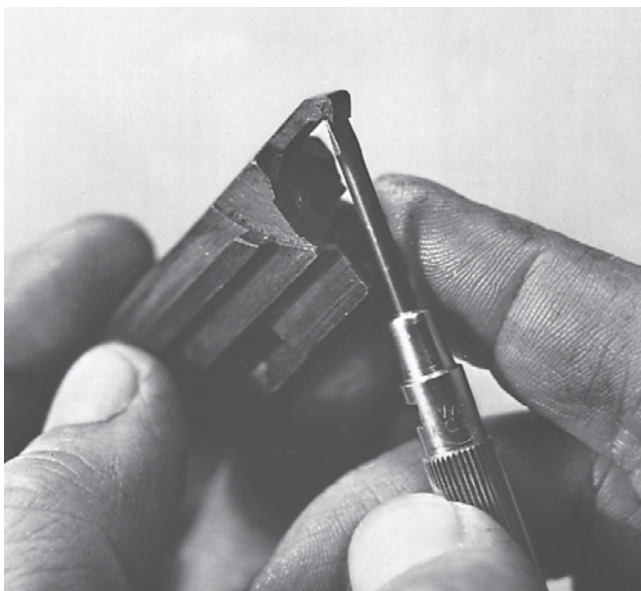


- 12.** Remove the temporarily inserted locking block and take out the breechblock toward the rear.

- 11.** Drifting out the cross pin in the base of the lever will allow removal of the lever latch plunger and its spring toward the rear. **Caution:** *This is a strong little spring, and it is under tension, so control it and ease it out.*

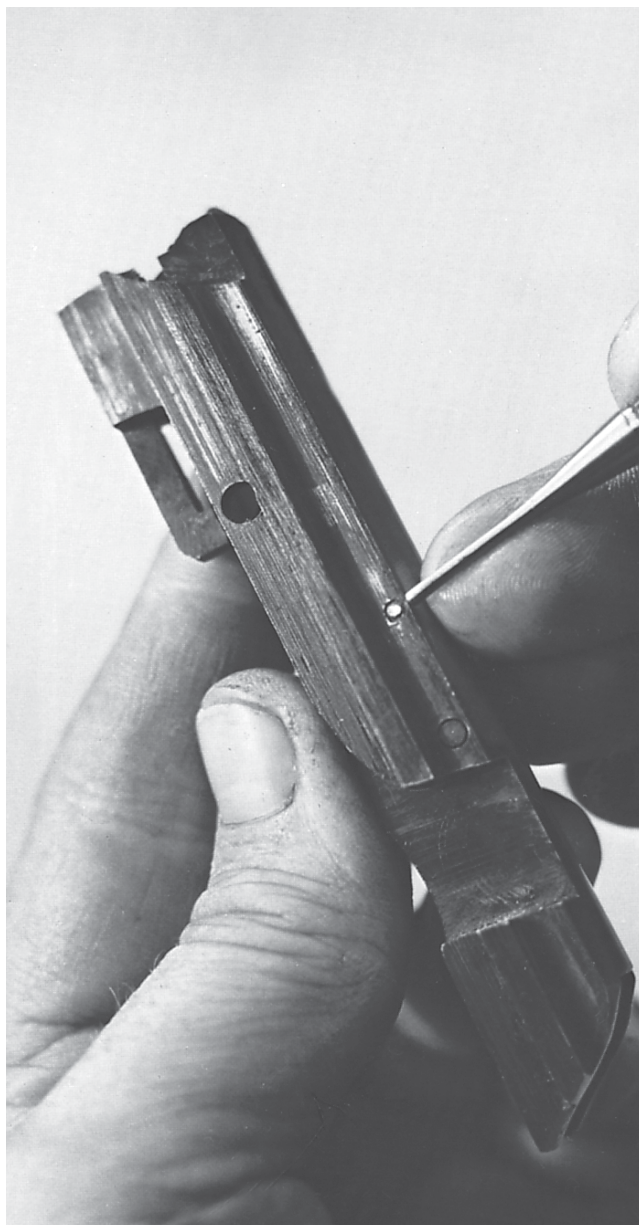


- 13.** Removal of the lever pin will also have freed the ejector and its collar and spring, and these can now be taken out of the breechblock toward the front.



- 15.** After the pin is drifted out, do not lift the extractor upward, as this may break its tempered tail. Hook a small screwdriver under the forward beak of the extractor, and lever it straight out toward the front.

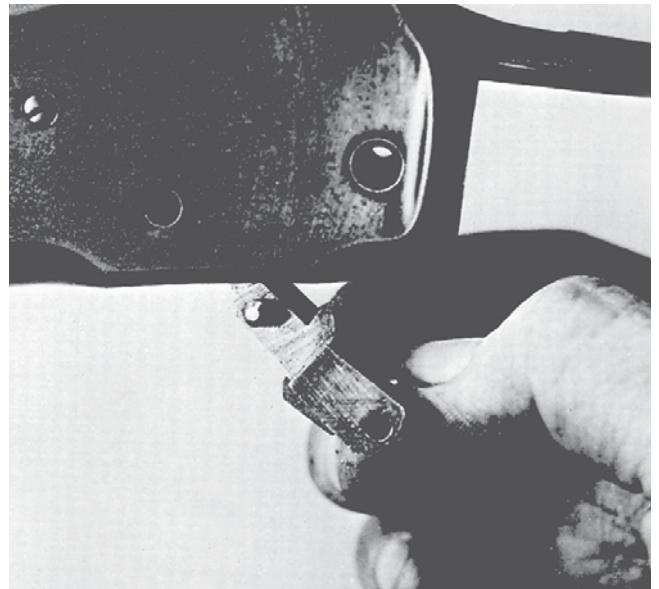
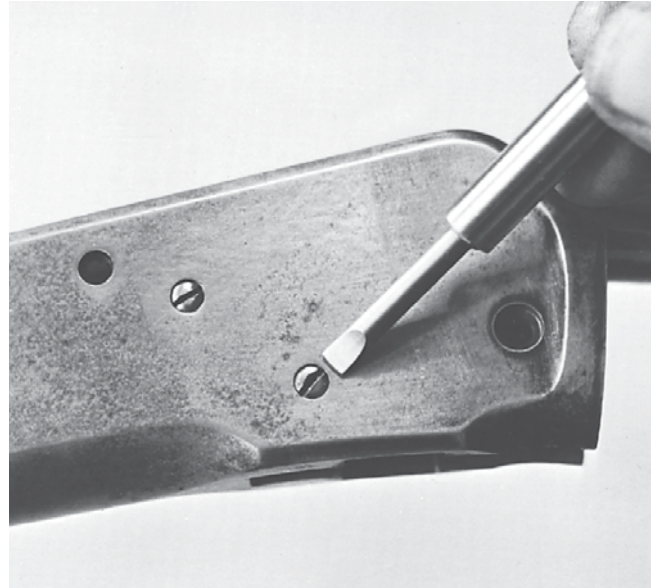
- 14.** Drifting out the smaller cross pin near the top of the bolt will allow removal of the extractor.



- 16.** Drift out the larger of the two cross pins in the bolt, the firing pin retaining pin, and take out the firing pin toward the rear.

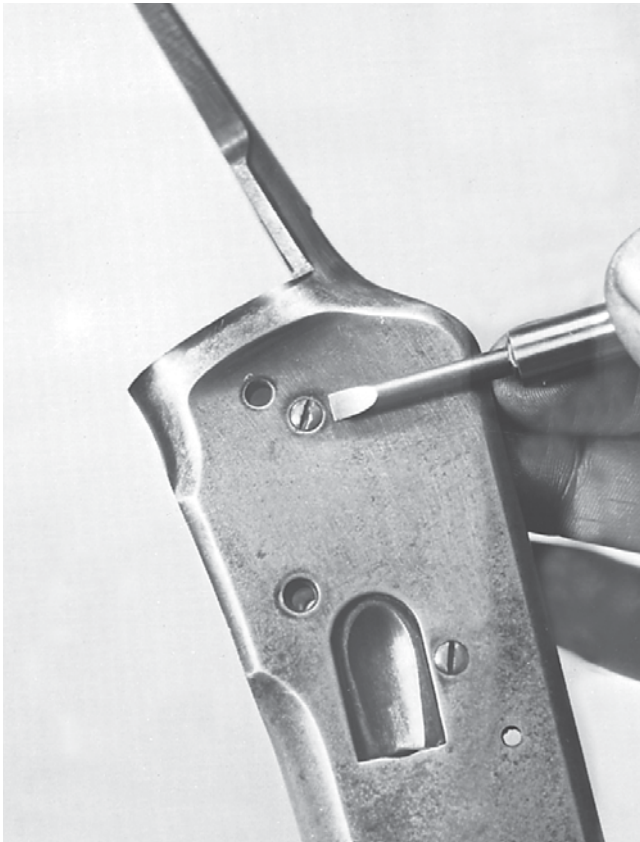


- 17.** Remove the carrier screws, one on each side of the receiver.

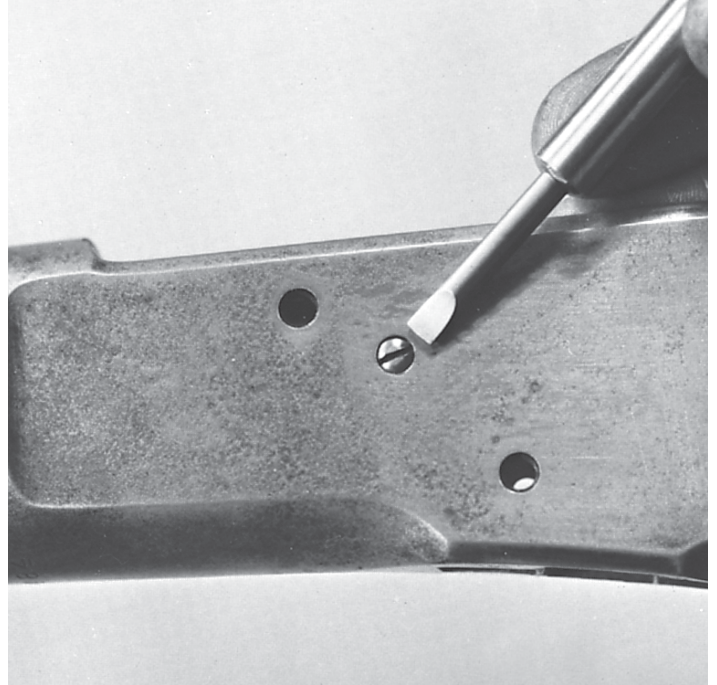


- 18.** After the screws are removed, move the carrier toward the rear, and take it out downward. Note that the carrier plunger may jump into one of the screw holes during removal, and a drift punch will then have to be inserted to depress the plunger and free it.

- 19.** The carrier plunger and its spring are retained in the carrier by a vertical pin. The spring is under tension, so restrain the plunger during removal.



- 20.** Removal of the cartridge guide screws, one on each side, will release the guides to be taken out of the inside of the receiver. The left guide has the cartridge stop mounted on a vertical pin at its forward end, and the cartridge stop spring is in a recess in the back of the guide. The spring is freed by removal of the guide mounting screw, so take care that it isn't lost during removal of the guide.

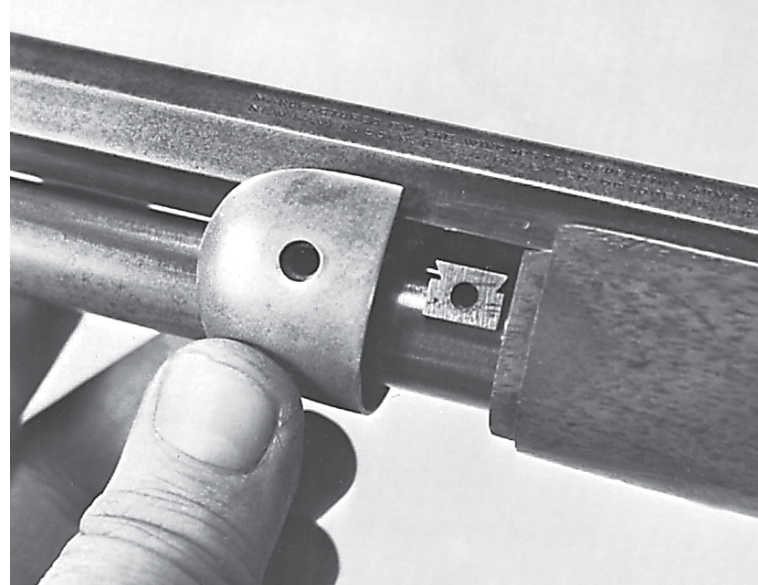


- 21.** The loading gate is its own spring, and is retained by a screw on the right side, near the rear of the receiver. After removal of the screw, the gate is easily taken out.

- 22.** Removal of the screw on the underside of the magazine tube near the muzzle will allow the end plug, magazine spring, and magazine follower to be taken out toward the front. **Note:** Some magazine springs have more tension than others. To be safe, restrain the end plug and ease it out.



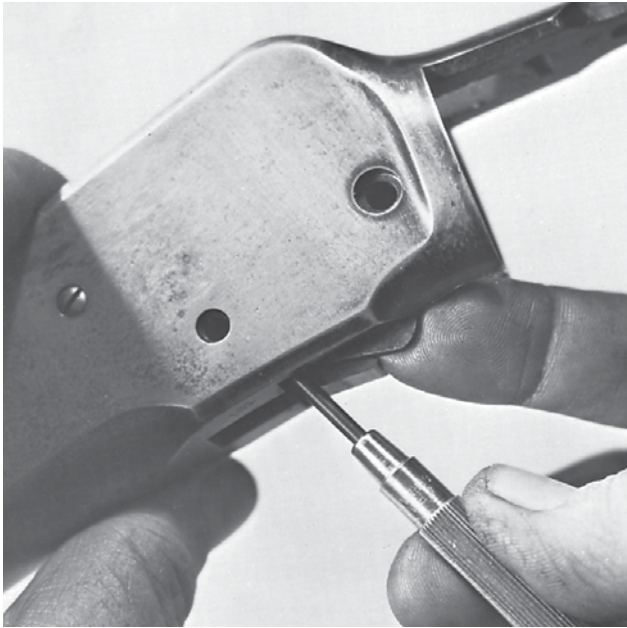
- 23.** Remove the screws on each side of the forend cap, and move the cap forward along the magazine tube.



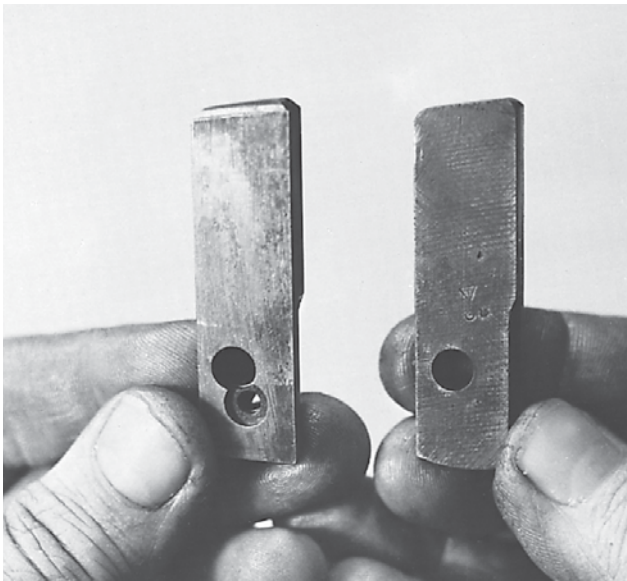
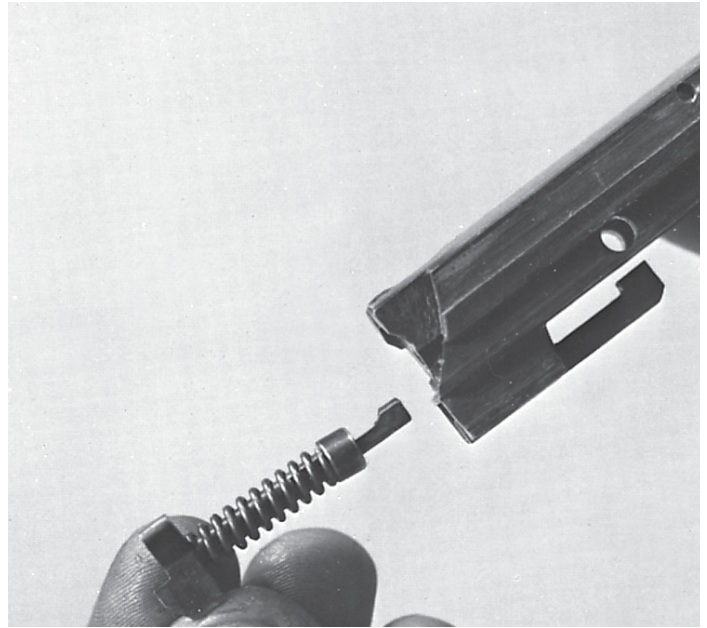
- 24.** Drift out the small cross pin in the magazine tube hanger loop, and remove the magazine tube toward the front. The forend is now moved forward, the downward and off.

Reassembly Tips:

1. When replacing the carrier in the receiver, it will be necessary to insert a small screwdriver to depress the carrier plunger to clear the inner frame wall at the rear.



2. When replacing the ejector in the front of the bolt, note that the collar goes at the rear of the spring, to contact the spring base hook below the bolt. Keep the receiver slanted upward during insertion of the bolt, to prevent the ejector assembly from dropping out.



3. When replacing the locking blocks in the receiver, remember that the one with the lock screw goes on the left side.

When replacing the lever and its bolt connector pin, once again insert a locking block from below, to hold the bolt in full forward position during replacement of the pin. Also, note that the pin is beveled on one end, and this end should be inserted.

When replacing the lever and its bolt connector pin, once again insert a locking block from below, to hold the bolt in full forward position during replacement of the pin. Also, note that the pin is beveled on one end, and this end should be inserted.



Winchester Model 1894

Similar/Identical Pattern Guns

The same basic assembly/disassembly steps for the Winchester Model 1894 also apply to the following guns:

Winchester Model 55

Winchester Model 94 Antique Carbine

Winchester Model 94 Big Bore Side Eject

Winchester Model 94 Deluxe

Winchester Model 94 Ranger Side Eject

Winchester Model 94 Trapper

Winchester Model 94 Wrangler

Winchester Model 94 XTR

Winchester Model 64 (1972-1974)

Winchester Model 94 Big Bore

Winchester Model 94 Classic Series

Winchester Model 94 Ranger

Winchester Model 94 Side Eject

Winchester Model 94 Win-Tuff

Winchester Model 94 Wrangler II

Winchester Model 94 44 Mag. S.R.C.

Data: Winchester Model 1894

Origin: United States

Manufacturer: Winchester Repeating

Arms Company

New Haven, Connecticut

Cartridge: 30-30 Winchester

Magazine capacity: 6 rounds

Overall length: 37 inches

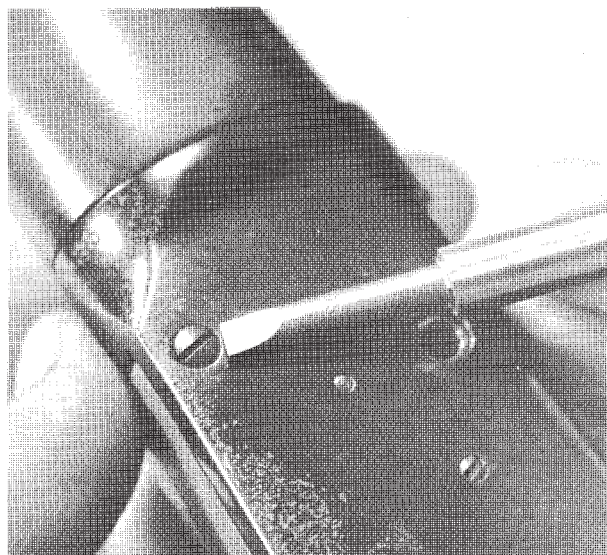
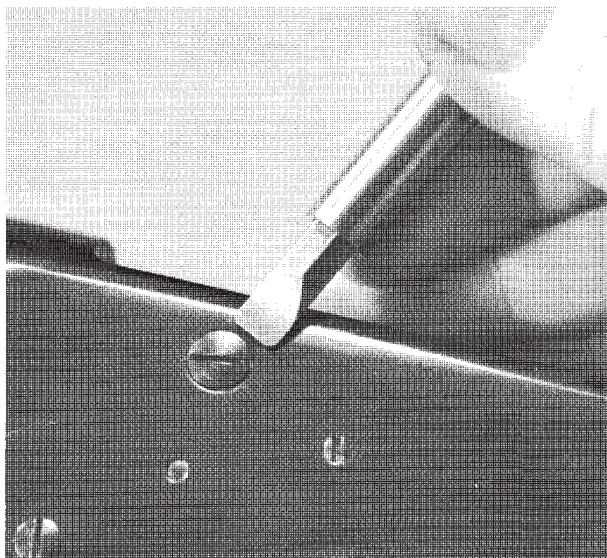
Barrel length: 20 inches

Weight: 6-1/2 pounds

To say that this gun needs no introduction would be an understatement. However, since some young readers might not have been with us long enough to have learned its history, let's briefly pass along the information that it was designed by John M. Browning, and has been produced continuously by Winchester since 1894. It was originally chambered for two blackpowder loads, but for most of its production life the calibers have been the 30-30 and 32 Winchester Special, the latter discontinued in the late 1970s. There have been several slight internal design changes along the way, but the instructions will generally apply to all 94s. As most readers will be aware, the gun is now made by U.S. Repeating Arms Co.

Disassembly:

1. Use a screwdriver with a wide, thin blade to remove the lever pin cover screw, located on the left side of the receiver at the upper front.

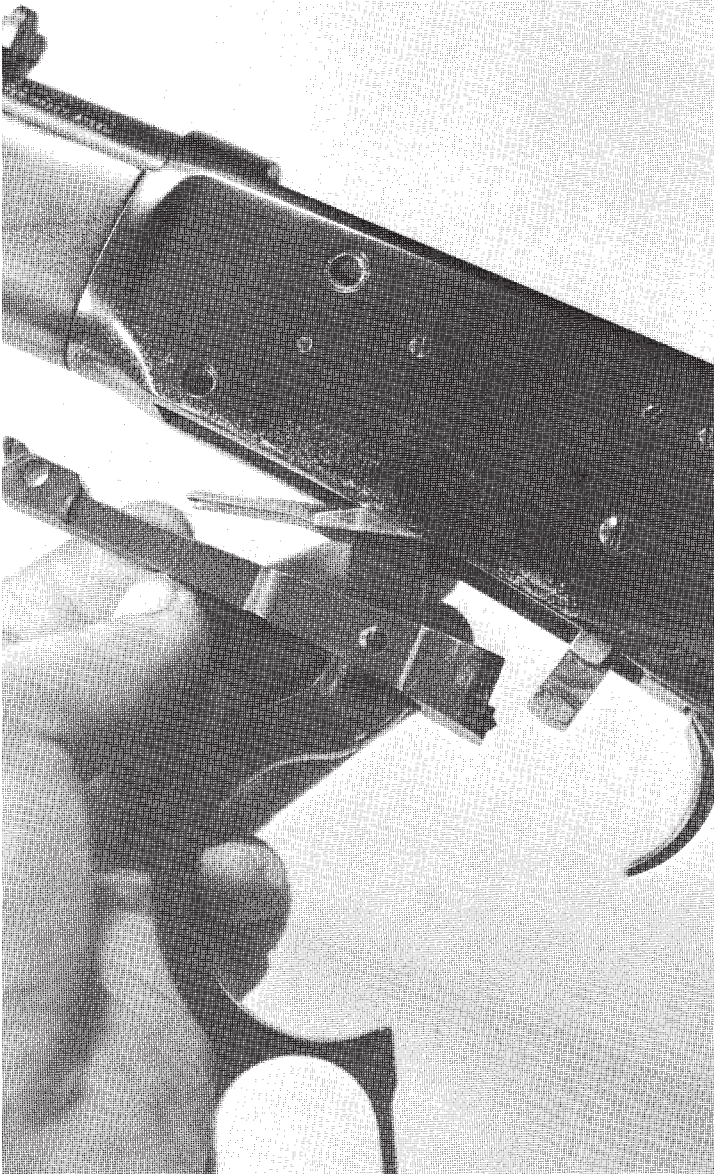


2. Use a drift punch to push out the lever pin toward the left. This is accessible through a small hole on the right side of the receiver, just above the front of the loading gate.

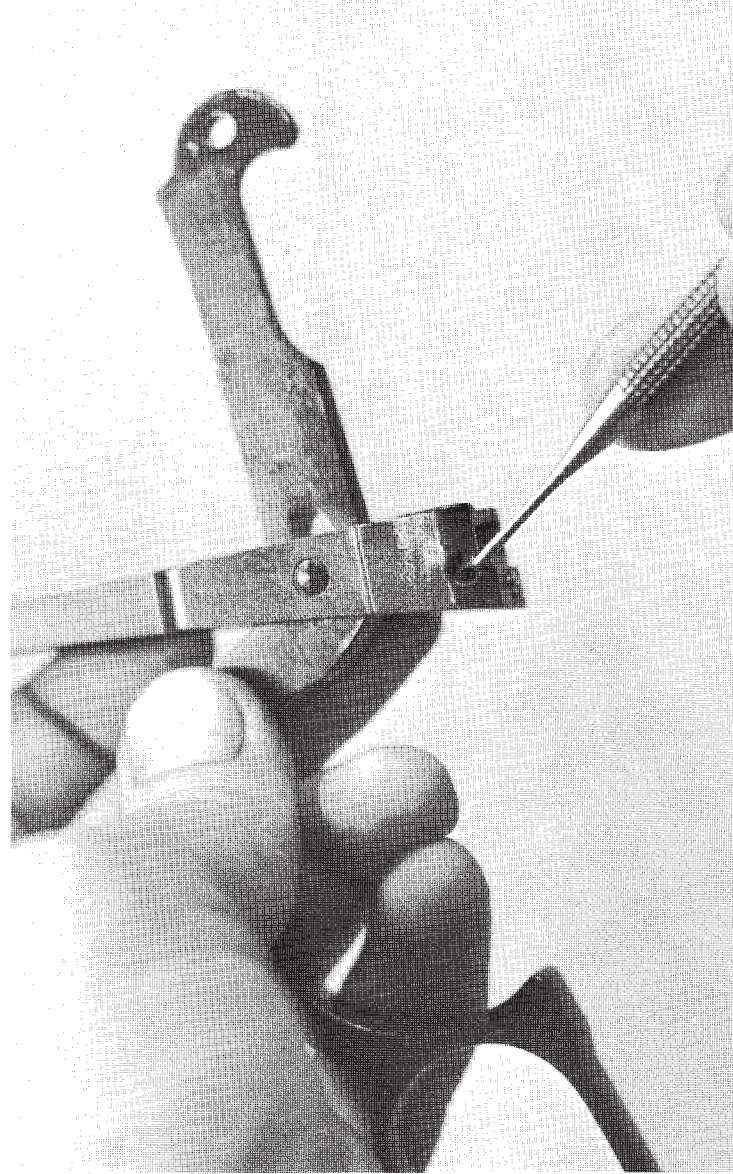


3. Remove the cross screw that pivots the link plate at the lower left front of the receiver.

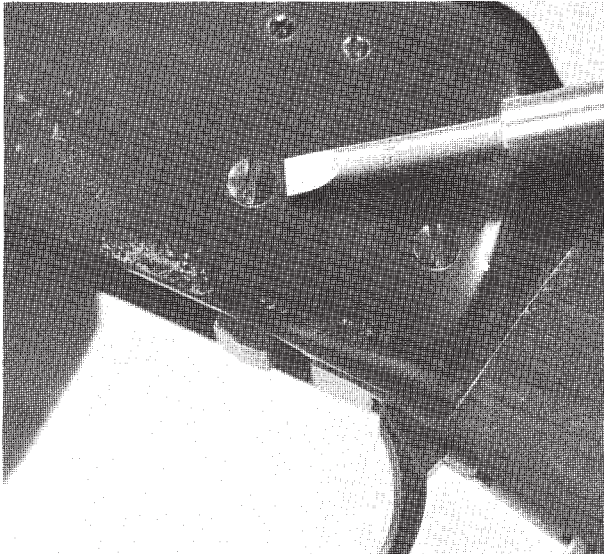
4. Move the lever downward, along with the attached link, then move them forward, disengaging the rear of the link from the locking block. The lever and link assembly are then removed downward.



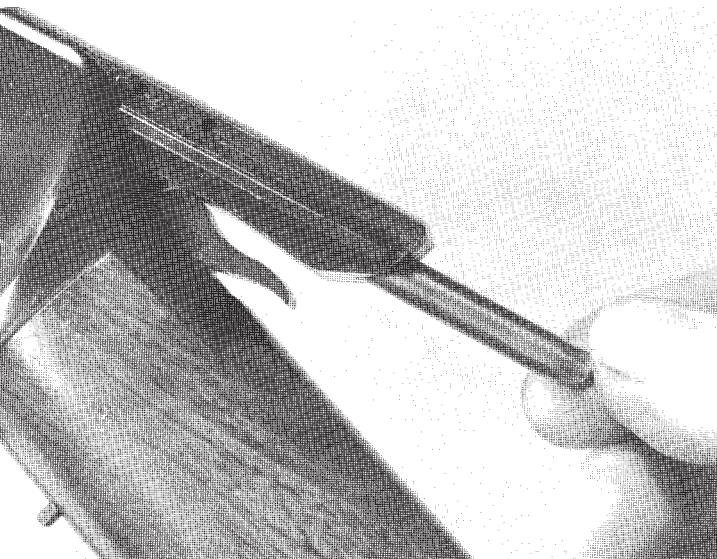
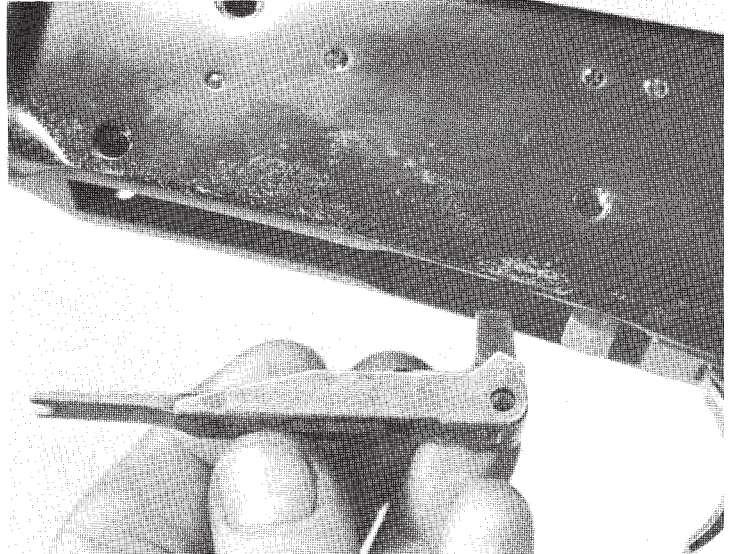
5. Drifting out the large cross pin in the link plate will release the lever for removal. Drifting out the small cross pin at the rear of the link plate will release the plate latch plunger and its spring toward the rear. The spring is under tension, so restrain the plunger and ease it out.



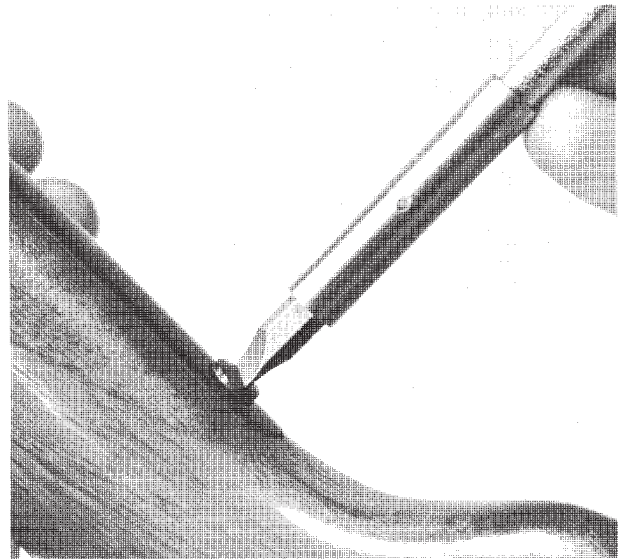
- 6.** Remove the carrier pivot screw toward the left. Note that on early guns, there are two separate screws, one on each side of the receiver.



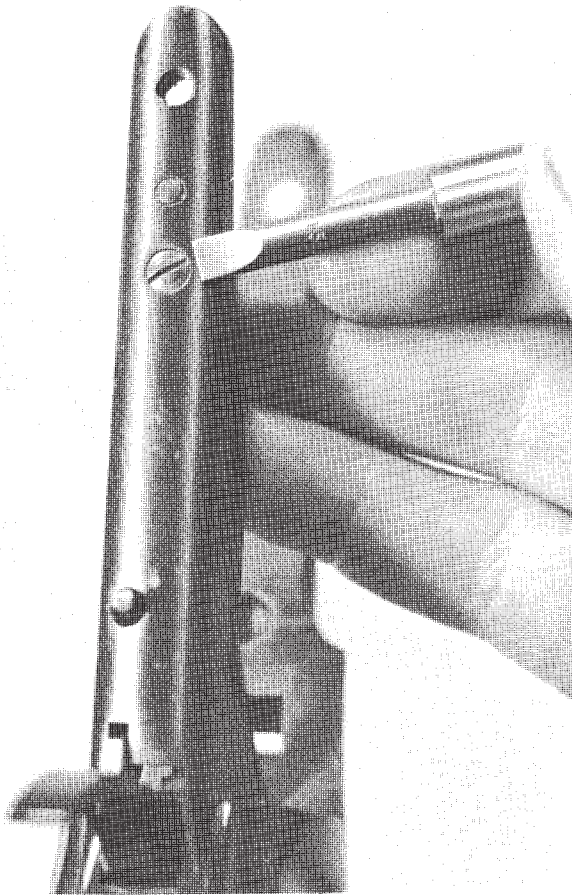
- 7.** Remove the carrier downward.



- 8.** It should be noted that removal of the lever will have released the firing pin (in late guns), and if it needs to be taken out for repair, this can be done without further disassembly. In early guns, a firing pin retaining pin at the lower rear of the bolt must also be removed. Also, the extractor can be taken out by moving the bolt to the rear and drifting out its cross pin or cross pins (later guns have two).

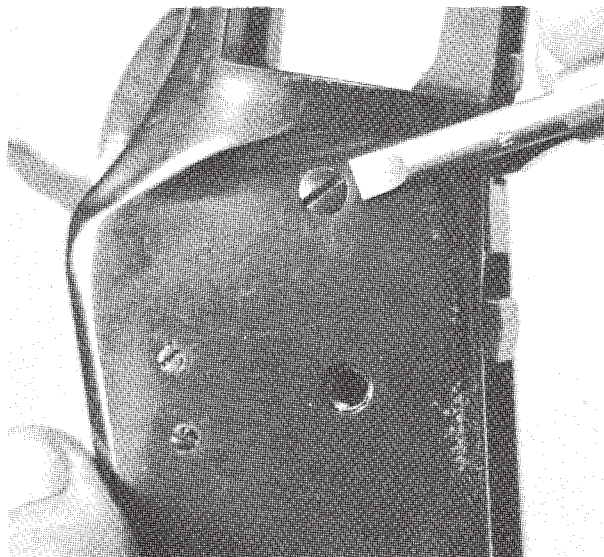
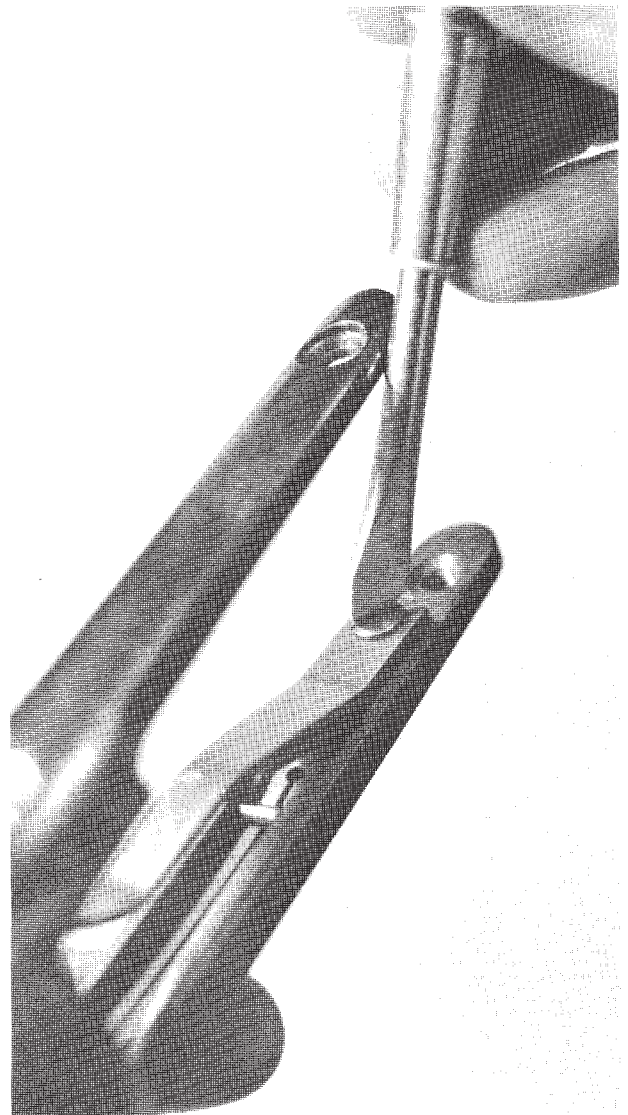


- 9.** Remove the vertical screw at the rear of the upper tang, and take off the stock toward the rear. If the stock is tightly fitted, bump the front of the comb with the heel of the hand to start it.



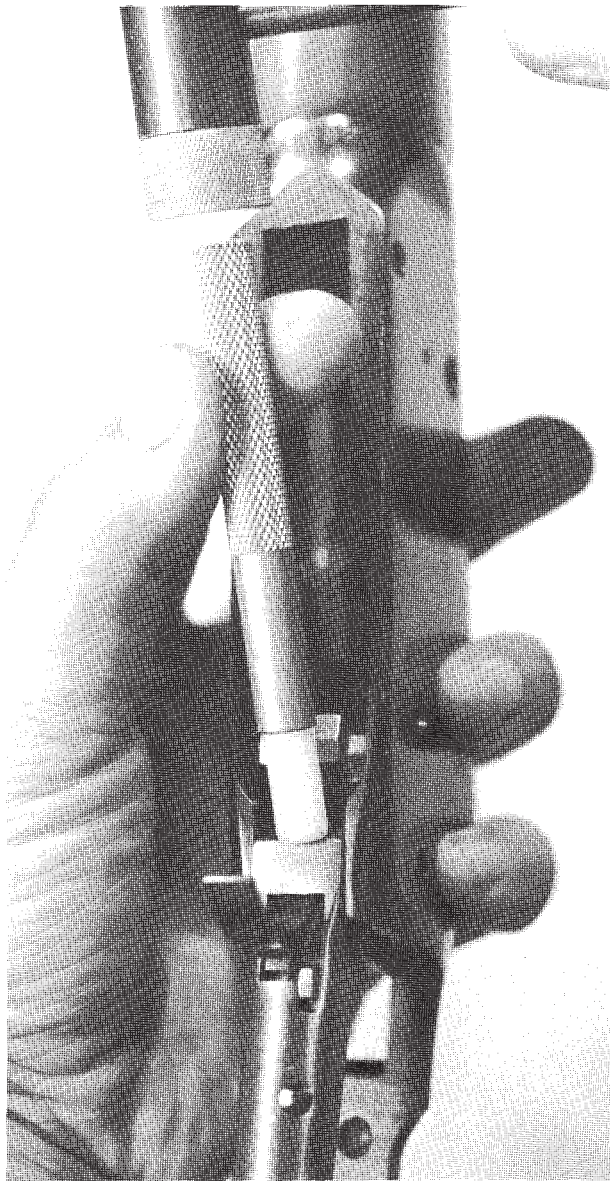
- 10.** With the hammer lowered to the fired position, remove the hammer spring screw, located on the inside of the lower tang at the rear. This will be made easier by first backing out or removing the hammer spring strain screw, as shown.

- 11.** Removal of the hammer spring screw will require an offset screwdriver, or one with an angled tip, as shown. After the screw is removed, the spring and its angled base are taken out toward the rear.

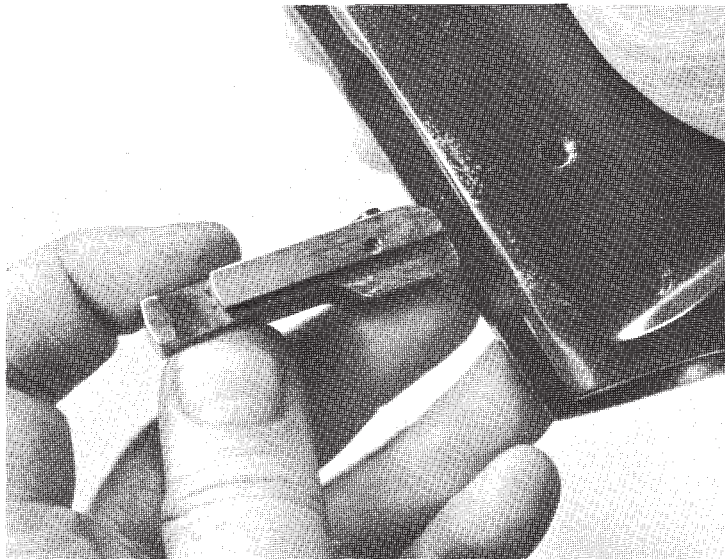


- 12.** Remove the cross screw that retains both the hammer and the lower tang/trigger housing. Remove the hammer upward and toward the rear.

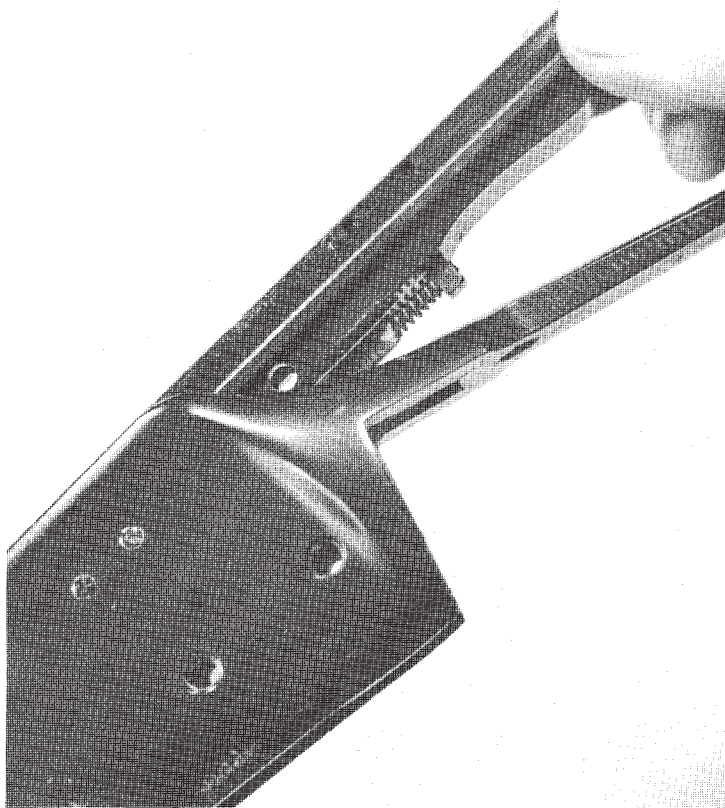
- 13.** Remove the lower tang/trigger housing unit toward the rear. If this assembly is tight, use a drift punch of nylon or some other non-marring material to nudge it out.

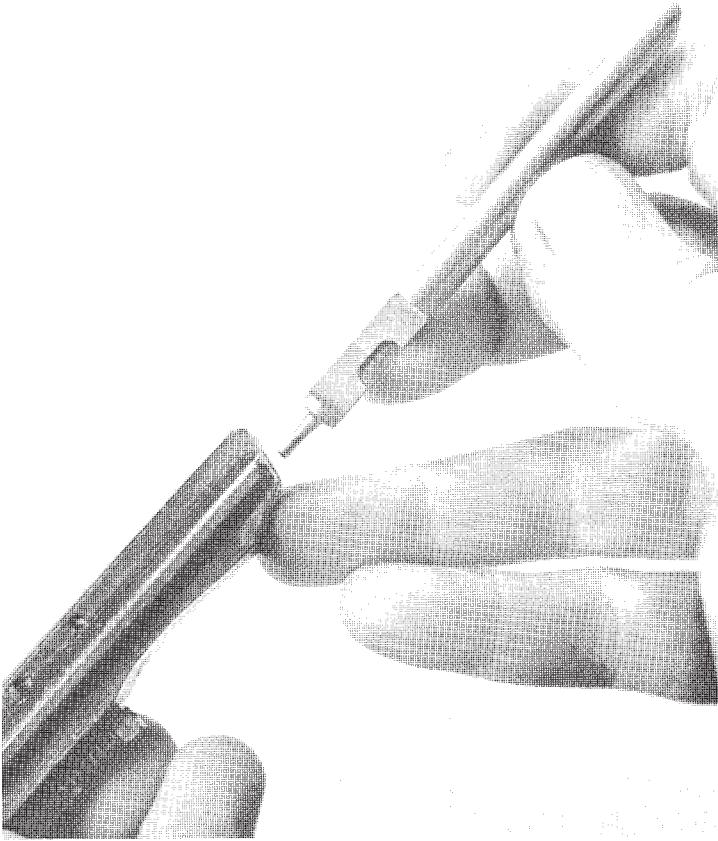


- 14.** The locking block can now be removed downward. Drifting out the roll cross pin near the top of the locking block will allow removal of the short firing pin striker.



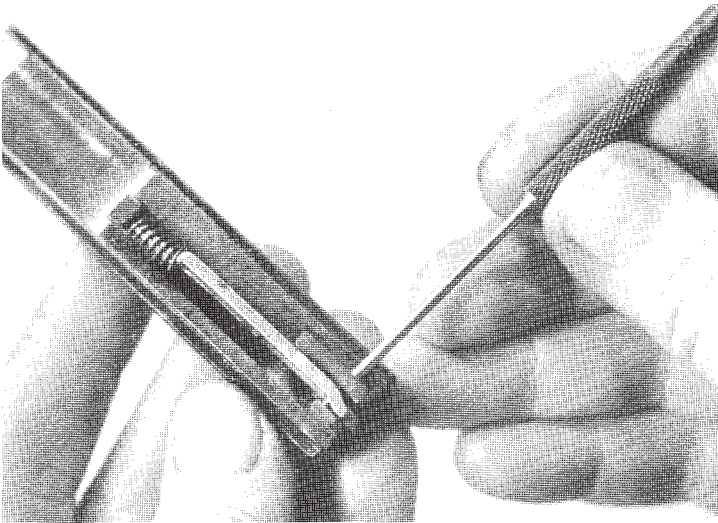
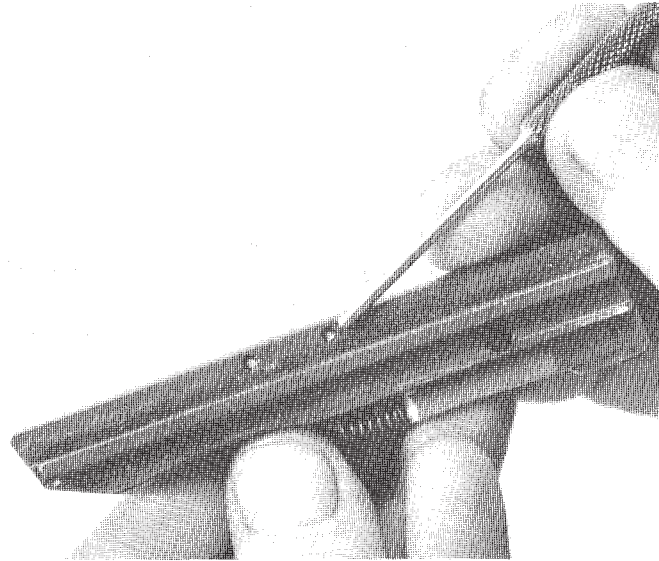
- 15.** The breechblock (bolt) can now be moved straight out of the receiver toward the rear.



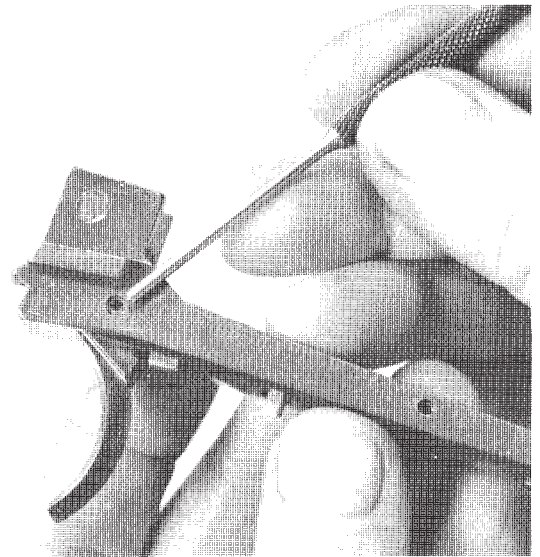


- 16.** If it has not been previously removed, the firing pin can now be taken out of the bolt toward the rear. In early guns, a small retaining cross pin at the lower rear of the bolt must be driven out to release the firing pin.

- 17.** The extractor is retained in the top of the bolt by a single solid cross pin (early guns), or by two roll cross pins (late guns). After these are drifted out, the extractor is removed upward.

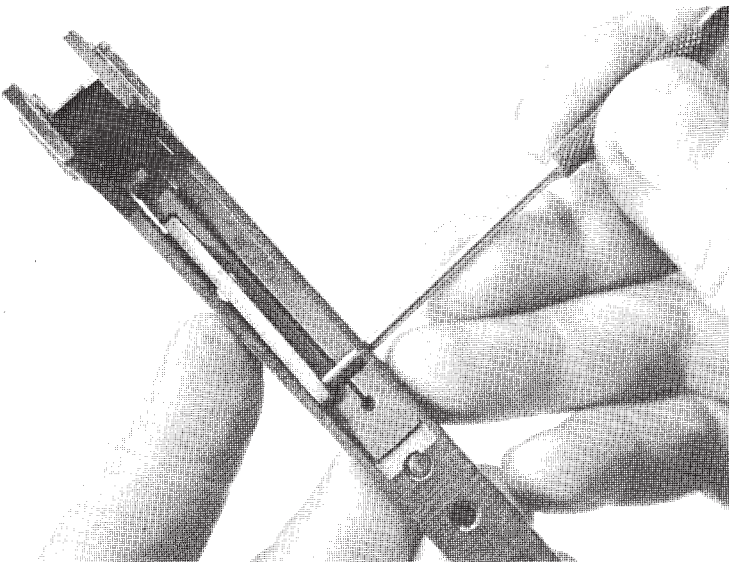


- 18.** The ejector and its spring are retained on the underside of the bolt by a single cross pin at the lower front. Use a roll pin drift to remove the pin, and take out the ejector and its spring toward the front.

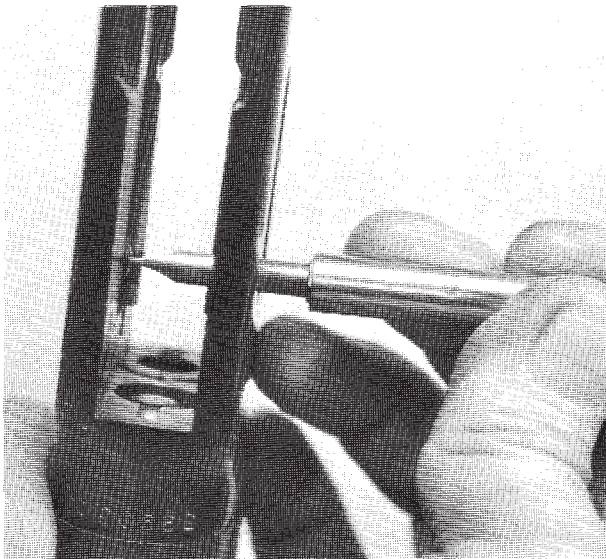
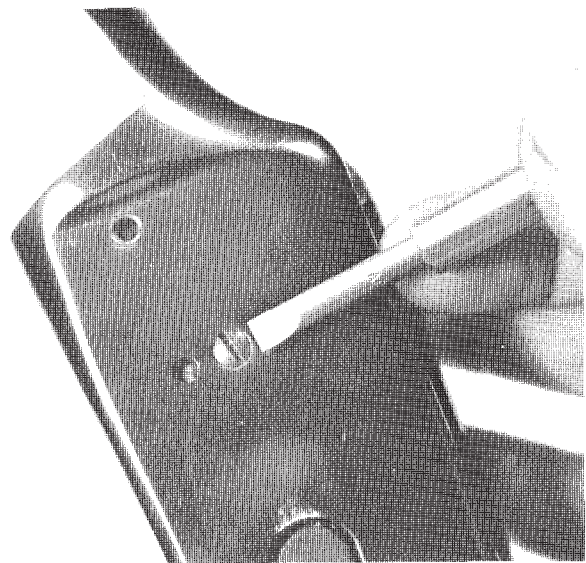


- 19.** The trigger and sear are retained in the trigger housing by a roll cross pin that is the pivot for both parts. After the pin is drifted out, the trigger is removed downward, the sear toward the front.

- 20.** A cross pin at the center of the lower tang unit retains both the trigger stop and the combination spring that powers the stop and the sear. Drift out the pin toward the left, so the spring will be released first.

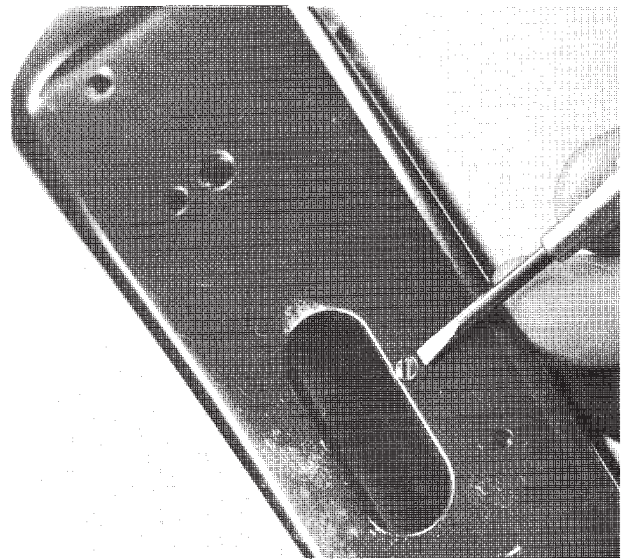


- 21.** Remove the screw on the right side of the receiver directly to the rear of the loading gate, and take out the loading gate from inside the receiver.

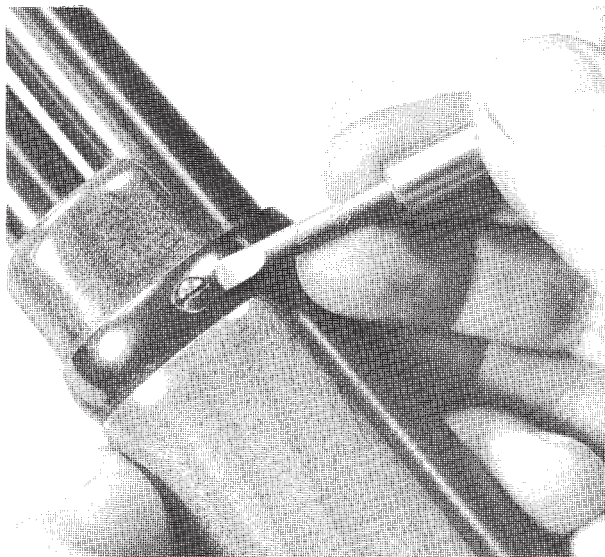
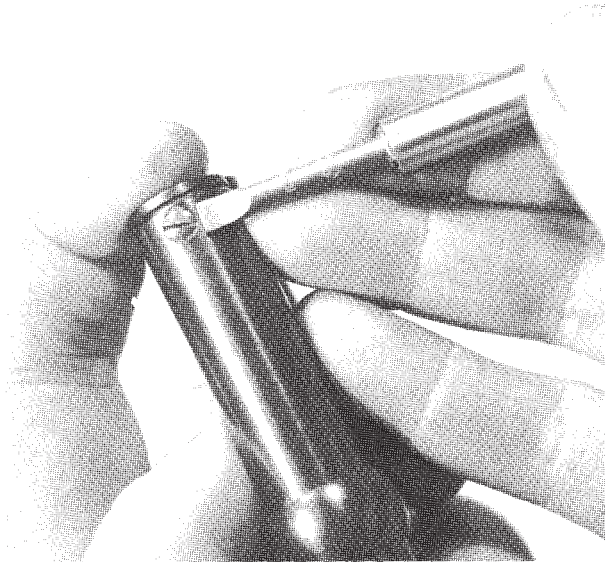


- 22.** With the loading gate removed, the screw that retains the carrier spring will be accessible through the front portion of the loading port. Remove the screw, and take out the spring from inside the receiver.

- 23.** There are two small screws, one on each side of the receiver, the one on the right being just above the loading port. These retain the right and left cartridge guides inside the receiver. In normal takedown, these are best left in place, as any slight misalignment during reassembly can cause problems, one of which is possible stripping of the screws.



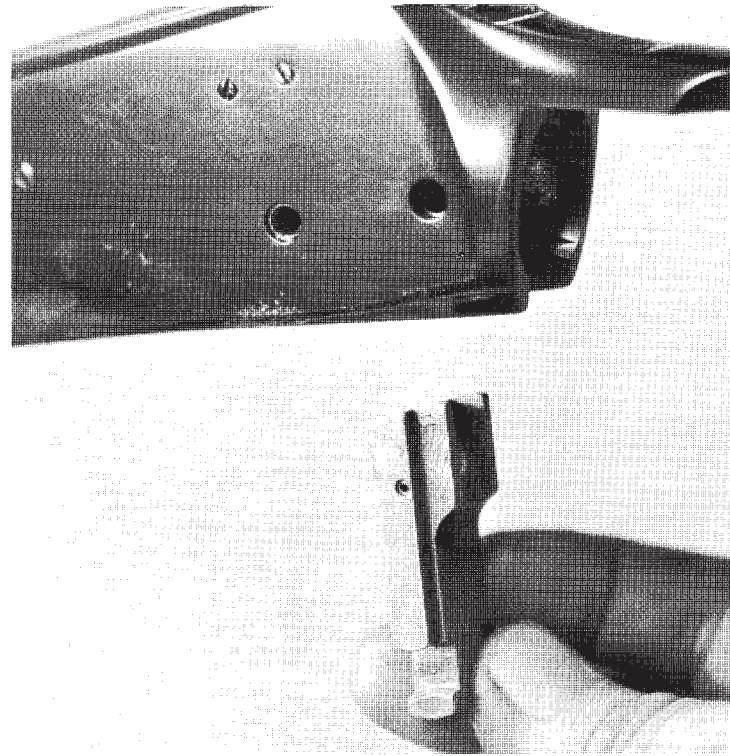
- 24.** Removal of the vertical screw at the forward end of the magazine tube will allow the magazine plug, magazine spring, and follower to be taken out toward the front. **Caution:** *The magazine spring is under some tension, so control it and ease it out.*



- 25.** Remove the cross screw from the front barrel band. Remove the cross screw from the rear barrel band, and slide the barrel band forward, off the front of the forend wood. The magazine tube can now be moved out toward the front, and the forend can be moved slightly forward and taken off downward.

Reassembly Tips:

- 1.** When replacing the locking block in the receiver, note that the upper wings of the block must be toward the rear.



When replacing the firing pin in the breechblock, note that it must be oriented for insertion of the lever, with its front recess on the left side—see step number 16.

When replacing the loading gate, hold it in position inside the receiver with a fingertip, centering the hole for insertion of the screw. To align the screw for proper start, allow the front tip of the gate to protrude from the loading port. As soon as the screw is started, though, be sure to depress the front of the gate inside the port before tightening the screw.

Index/Cross-Reference

A		L	
Argentina (7.65mm).....	133	Luxembourg (30-06).....	133
Argentine Model 1891 Carbine.....	13	M	
Argentine Model 1909 Cavalry Carbine.....	224	Mannlicher Ultra Light.....	440
Argentine Model 1909 Engineer Carbine.....	224	Mannlicher-Schoenauer Model 1952.....	199
Argentine Model 1909 Rifle.....	224	Mannlicher-Schoenauer Model 1956.....	199
Australian SMLE No I, Mark III*.....	28	Marlin Model 30AS.....	209
Austrian Mannlicher Model 1895		Marlin Model 45.....	217
Cavalry Carbine.....	20	Marlin Model 336 Extra-Range.....	209
Austrian Mannlicher Model 1895 Short Rifle.....	20	Marlin Model 336 LTS.....	209
B		Marlin Model 336 Marauder.....	209
Belgian Congo (30-06).....	133	Marlin Model 336 Sporting Carbine.....	209
Belgian Model 1889 Rifle, Carbine.....	13	Marlin Model 336 Zipper.....	209
Belgium (30-06).....	133	Marlin Model 336C.....	209
Beretta BM-59.....	505	Marlin Model 336CS.....	209
Brazil (30-06).....	133	Marlin Model 336DL.....	209
Brazilian Model 1894 Rifle.....	451	Marlin Model 336L.....	209
Brazilian Model 1908 Rifle.....	224	Marlin Model 336T.....	209
Brazilian Model 1908 Short Rifle.....	224	Marlin X7.....	217
British No. 4, Mark 1.....	28	Marlin X7C.....	217
British No. 4, Mark 1 (T).....	28	Marlin X7S.....	217
British No. 4, Mark 1*.....	28	Marlin X7V.....	217
British No. 4, Mark 1* (T).....	28	Mausser Model 1904(Brazil, Chile, China).....	224
British No. 4, Mark 1/2.....	28	Mexican Model 1902 Rifle.....	451
British No. 4, Mark 1/3.....	28	Mexican Model 1907.....	224
British No. 4, Mark 2.....	28	Mexican Model 1910.....	224
British No. 4, Mark 3.....	28	Mexican Model 1912.....	224
British No. 5, Mark 1.....	28	Mexican Model 1936.....	224
British Pattern 14 (P-14) Rifle.....	490	Mitchell 1873 Winchester Replica.....	545
British SMLE Cal. 22 R.F. Short Rifle Mark III.....	28	Model Carbine.....	66
British SMLE No. I, Mark I.....	28	Mossberg 4x4.....	232
British SMLE No. I, Mark I Carbine.....	28	Mossberg Model 472.....	237
British SMLE No. I, Mark I*.....	28	Mossberg Model 472 Brush Gun.....	237
British SMLE No. I, Mark I**.....	28	Mossberg Model 472 Carbine.....	237
British SMLE No. I, Mark I***.....	28	Mossberg Model 472BA.....	237
British SMLE No. I, Mark II.....	28	Mossberg Model 472BAS.....	237
British SMLE No. I, Mark II*.....	28	Mossberg Model 472PCA.....	237
British SMLE No. I, Mark II**.....	28	Mossberg Model 472PRA.....	237
British SMLE No. I, Mark II***.....	28	Mossberg Model 472SAB.....	237
British SMLE No. I, Mark III*.....	28	Mossberg Model 479PC.....	237
British SMLE No. I, Mark IV.....	28	Mossberg Model 479PCA.....	237
British SMLE No. I, Mark V.....	28	Mossberg Model 479RR.....	237
British SMLE No. 2, Mark IV (22 RF).....	28	Mossberg Model 479SC.....	237
British SMLE No. 2, Mark IV* (22 RF).....	28	Mossberg MVP.....	232
Browning B92.....	555	N	
Browning BLR.....	46	Navy Arms Model 1873-Style Rifle.....	545
Browning BLR Long Action.....	46	Navy Arms Rolling Block.....	302
Browning High-Power Rifle.....	224	Navy Arms Rolling Block Baby Carbine.....	302
Browning Model 71.....	536	Navy Arms Rolling Block Buffalo Carbine.....	302
Browning Model 1886.....	536	Navy Arms Rolling Block Buffalo Rifle.....	302
Bulgarian Model 1895M.....	20	Navy Arms Rolling Block Creedmoor Target.....	302
Bulgarian Model 1895.....	20	NEF Hand-Rifle.....	143
C		NEF Super-Light.....	143
Calico Model M-951-S.....	56	NEF Survivor.....	143
Calico Model M-951 Tactical Carbine.....	56	Netherlands East Indies (30-06).....	133
Century International Arms Centurion		Norwegian Krag Rifle.....	483
14 Sporter.....	490	O	
Century International Arms Enfield		Olympic Arms AR-15 Heavy Match.....	66
Sporter No. 4.....	28	Olympic Arms AT-15 Service Match.....	66
Chilean Model 1895 Rifle.....	451	Olympic Arms CAR-15.....	66
Chilean Model 1912.....	224	Original Sharps rifles and carbines, and other	
Chinese "Chiang Kai-shek"		modern reproductions.....	85
(Mausser "Standard Model").....	224	Original U.S. Military Model 1873 rifles and	
Chinese Type 53 Carbine.....	369	carbines, and other modern reproductions.....	246
Chinese Type 56.....	376	P	
Cimarron 1873 30" Express.....	545	Paraguayan Model 1907 Carbine.....	224
Cimarron 1873 Button Half-Magazine.....	545	Paraguayan Model 1907 Rifle.....	224
Cimarron 1873 Short Rifle.....	545	Peruvian Model 1909 Rifle.....	224
Colombia (30-06).....	133		
Colombian Model 1912 Rifle.....	224		
Colt AR-15 Collapsible Stock Model.....	66		
Colt AR-15 Delta HBAR Match.....	66		
Colt AR-15A2 Carbine.....	66		
Colt AR-15A2 Delta HBAR.....	66		
Colt AR-15A2 Government.....	66		
Colt AR-15A2 Government			
Model Target.....	66		
Colt AR-15A2 HBAR.....	66		
Colt AR-15A2 Sporter II.....	66		
Colt Sporter Lightweight Rifle.....	66		
Colt Sporter Match Delta HBAR.....	66		
Colt Sporter Match HBAR.....	66		
Colt Sporter Target Model.....	66		
Costa Rican Model 1910 Rifle.....	224		
CZ 527 American.....	77		
CZ 527 Varmint.....	77		
CZ 527 Target.....	77		
Czech Model 24 (VZ24).....	224		
D			
Dixie Model 1873.....	545		
E			
E.M.F. Model 1873.....	545		
Eagle Arms EA-15.....	66		
Egypt (7.92mm).....	133		
F			
Finnish Model 24 Rifle.....	369		
Finnish Model 27 Carbine.....	369		
Finnish Model 27 Rifle.....	369		
Finnish Model 28 Rifle.....	369		
Finnish Model 28/30 Rifle.....	369		
Finnish Model 39 Rifle.....	369		
Finnish Model 91.....	369		
Finnish Model 91 Dragoon Rifle.....	369		
FN Supreme Mauser.....	224		
G			
German Model 98a Carbine.....	224		
German Model 98b Carbine.....	224		
German Model G33/40 Carbine.....	224		
H			
H & R Ultra Comp.....	143		
H & R Ultra Hunter.....	143		
HK SL8-1.....	159		
Howa Axiom.....	170		
Hungarian Stutzen Model 31.....	20		
I			
Indian SMLE No. I, Mark III*			
(Ishapore Arsenal).....	28		
Interarms Mark X.....	224		
Iranian Model 1930 Short Rifle.....	224		
Iranian Model 1938 Rifle.....	224		
Iranian Model 1949 Short Rifle.....	224		
Italian Model 1891 Rifle.....	176		
Italian Model 1891 TS Carbine.....	176		
Italian Model 1891/24 Carbine.....	176		
Italian Model 1891/38 Rifle.....	176		
Italian Model 1938 Carbine.....	176		
Italian Model 1938 Rifle.....	176		
Italian Model 1938 TS Carbine.....	176		
Italian Model 1941 Rifle.....	176		
Iver Johnson M-1 Carbine.....	497		
J			
Japanese Type 30 Rifle.....	183		
Japanese Type 38 (Model 1905).....	183		
Japanese Type 44 Carbine.....	183		
Japanese Type 97 Sniper.....	183		

Plainfield M-1 Carbine	497
Polish Model 91/98/25 Rifle	369
Polish Model 1944 Carbine	383
Polytech M14S	421

R

Remington Model 30 Rifle	490
Remington Model 74 Sportsman	268
Remington Model 78 Sportsman	262
Remington Model 660	256
Remington Model 700 ADL	262
Remington Model 700 AS, FS	262
Remington Model 700 BDL Custom Deluxe	262
Remington Model 700 BDL Varmint Special	262
Remington Model 700 C Grade	262
Remington Model 700 Classic	262
Remington Model 700 Mountain Rifle, Custom KS	262
Remington Model 700 Safari Grade, Custom KS	262
Remington Model 710	281
Remington Model 740	268
Remington Model 742 BDL	268
Remington Model 742 Carbine	268
Remington Model 760	294
Remington Model 788	287
Remington Model 788 Carbine	287
Remington Model 7400	268
Remington Model 7400 Carbine	268
Remington Model 7615	294
Remington Model Four	268
Remington Model Seven FS	262
Remington Model Seven, Custom KS	262
Remington Mohawk 600	256
Remington No. 2	302
Remington No. 3	302
Remington No. 4	302
Remington No. 5	302
Rossi M92 SRC	555
Rossi M92 SRS	555
Ruger 44 International Carbine	319
Ruger 44 Sporter Deluxe Carbine	319
Ruger 44RS Carbine	319
Ruger Mini Thirty	338
Ruger Mini-14 Ranch Rifle	338
Ruger Model 77R Mark II	354
Ruger Model 77R, RS Magnum	354
Ruger Model 77RL	354
Ruger Model 77RLS	354
Ruger Model 77RSI International	354
Ruger Model 77V Varmint	354
Ruger No. 1A Light Sporter, 1S Medium Sporter	346
Ruger No. 1B	346
Ruger No. 1H Tropical Rifle	346
Ruger No. 1RSI International	346
Ruger No. 1V Varmint	346
Ruger No. 3 Carbine	346
Russian Model 1891 Dragoon Rifle	369
Russian Model 1891/30 Rifle	369
Russian Model 1938 Carbine	369
Russian Model 1944 Carbine	369

S

Sako Finnbear	386
Sako Model 72	386
Sako Vixen	386
Savage Model 99A	399
Savage Model 99B Takedown	399
Savage Model 99C	399
Savage Model 99CD	399
Savage Model 99DE Citation	399
Savage Model 99DL	399
Savage Model 99E	399
Savage Model 99E Carbine	399

Savage Model 99EG	399
Savage Model 99F	399
Savage Model 99F Featherweight	399
Savage Model 99G	399
Savage Model 99H	399
Savage Model 99K	399
Savage Model 99PE	399
Savage Model 99R	399
Savage Model 99RS	399
Savage Model 99T	399
Savage Model 99-358	399
Savage Model 110 Sporter	408
Savage Model 110B	408
Savage Model 110CY	408
Savage Model 110D	408
Savage Model 110E	408
Savage Model 110F	408
Savage Model 110FNS	408
Savage Model 110FP	408
Savage Model 110FX	408
Savage Model 110FXP3	408
Savage Model 110G	408
Savage Model 110GB	408
Savage Model 110GV	408
Savage Model 110GX	408
Savage Model 110GXP3	408
Savage Model 110K	408
Savage Model 110M	408
Savage Model 110MC	408
Savage Model 110P	408
Savage Model 110PE	408
Savage Model 110S	408
Savage Model 110V	408
Savage Model 110WLE	408
Savage Model 111 Chieftan	408
Savage Model 112FV	408
Savage Model 112R	408
Savage Model 112V	408
Savage Model 114CU Classic Ultra	408
Savage Model 116FSS	408
Spanish "El Tigre" Carbine	555
Spanish Model 1891 Rifle	13
Spanish Model 1893 Rifle	451
Spanish Model 1893 Short Rifle	451
Spanish Model 1895 Carbine	451
Spanish Model 1916 Artillery Carbine	451
Springfield Armory M-1 Garand	505
Springfield M21 Tactical	421
Springfield Model 840	416
Springfield Armory SAR 48	121
Springfield Armory SAR 48 Bush Rifle	121
Springfield Armory SAR 4800	121
Springfield Armory SAR Para Model	121
Springfield SOCOM 16	421
Springfield SOCOM II	421
Springfield SOCOM M1A Scout	421
Star Rolling Block Carbine	302
Steyr Elite	440
Swedish Ljungmann AG42	93
Swedish Ljungmann AG42B	93
Swedish Model 38 Rifle	451
Swedish Model 40	224
Swedish Model 96 Rifle	451
Swiss Schmidt-Rubin Model 1911 Carbine	458

T

Thompson/Center Icon	473
Tikka 595	478
Tikka 658	478
Tikka 558	478
Tikka T3	478
Turkish Model 1890	13
Turkish Model 1893 Rifle	451

Turkish Model 1903 Rifle	224
Turkish Model 1905 Carbine	224
Turkish Model 90T	13

U

U.S. 30 M1A1	497
U.S. M-14	
U.S. Model 1892 Krag-Jorgensen	483
U.S. Model 1895 Krag-Jorgensen	483
U.S. Model 1896 Krag-Jorgensen	483
U.S. Model 1898 Krag-Jorgensen	483
U.S. Model 1898 Krag-Jorgensen Carbine	483
U.S. Model 1903A3 Springfield	514
Uberti 1873 "Trapper's Model"	545
Uberti 1873 Carbine	545
Uberti 1873 Sporting Rifle	545
Uberti Rolling Block Baby Carbine	302
Universal M-1 Carbine	497

V

Venezuela (7x57mm)	133
Venezuelan Model 1910 Rifle	224

W

Weatherby Alaskan	521
Weatherby Euromark	521
Weatherby Fibermark	521
Weatherby Lazermark	521
Weatherby Mark V Safari Grade	521
Weatherby Mark V Ultramark	521
Weatherby Vanguard	170
Weatherby Vanguard Classic I	521
Weatherby Vanguard Classic II	521
Weatherby Vanguard VGX Deluxe	521
Weatherby Vanguard Weatherguard	521
Winchester Model 1886	536
Winchester Model 53	555
Winchester Model 55	565
Winchester Model 64 (1972-1974)	565
Winchester Model 65	555
Winchester Model 670	528
Winchester Model 70 Featherweight	528
Winchester Model 70 H.B. Varmint	528
Winchester Model 70 Lightweight Carbine	528
Winchester Model 70 Lightweight Rifle	528
Winchester Model 70 Mannlicher	528
Winchester Model 70 Sporter	528
Winchester Model 70 Super Express	528
Winchester Model 70 Winlite	528
Winchester Model 70 Win-Tuff Featherweight, Lightweight	528
Winchester Model 70A	528
Winchester Model 94 44 Mag. S.R.C.	565
Winchester Model 94 Antique Carbine	565
Winchester Model 94 Big Bore	565
Winchester Model 94 Big Bore Side Eject	565
Winchester Model 94 Classic Series	565
Winchester Model 94 Deluxe	565
Winchester Model 94 Ranger	565
Winchester Model 94 Ranger Side Eject	565
Winchester Model 94 Side Eject	565
Winchester Model 94 Trapper	565
Winchester Model 94 Win-Tuff	565
Winchester Model 94 Wrangler	565
Winchester Model 94 Wrangler II	565
Winchester Model 94 XTR	565
Winchester Model 670 Carbine	528
Winchester Model 770	528
Winchester Ranger	528

Y

Yugoslavian Model 48 Rifle	224
Yugoslavian Model 59/66	376
Yugoslavian Model 90T	13
Yugoslavian Model 95M	20
Yugoslavian Model 1910 Rifle	224



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About the Author

Kevin Muramatsu regularly writes gunsmithing columns for *Gun Digest the Magazine*, is reloading editor for the *Gun Digest* annual book, and authored the most recent editions of *Gun Digest* assembly/disassembly books for rimfire rifles, pistols and shotguns.



Gun Digest Books

An imprint of F+W Media, Inc.
www.gundigeststore.com

US \$34.99
(CAN \$36.99)

U2620
ISBN 13: 978-1-4402-3544-3
ISBN 10: 1-4402-3544-9

